

APPEARANCES OF COUNSEL:

FOR THE PLAINTIFF:

NOSSAMAN, LLP
BY: BYRON P. GEE
BY: RAVEN MCGUANE
BY: PATRICK J. RICHARD
BY: FRED FUDACZ
777 South Figueroa Street
34th Floor
Los Angeles, California 90017

NOSSAMAN, LLP
BY: ILSE CHANDALAR SCOTT
50 California Street
34th Floor
San Francisco, California 94111

FOR THE DEFENDANTS:

EDLIN GALLAGHER HUIE & BLUM
BY: MICHAEL E. GALLAGHER, JR.
BY: FRED M. BLUM
BY: DANIEL ERIC TROWBRIDGE
500 Washington Street
Suite 700
San Francisco, California 94111

ALSO PRESENT:

Matt Stone
Scott Fryer
Ron Beaton
Eric Lardiere

INDEX OF WITNESSES

WITNESSES

PAGE

STANIN, Phyllis

Cross-examination by Mr. Blum

851

Redirect examination by Mr. Gee

911

ZELIKSON, Jeffrey

Direct examination by Mr. Richard

918

Cross-examination by Mr. Blum

964

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

INDEX OF EXHIBITS

			FOR IDENTIFICATION PG.	FOR EVIDENCE PG.
NUMBER	DESCRIPTION			
169	Stanin Expert Report		888	888
179	Stanin Expert Report		871	871
180	Stanin Expert Report		872	872
182	Stanin Expert Report		872	872
186	Stanin Expert Report		892	892

1 **MONDAY, NOVEMBER 22, 2021; 12:57 P.M.**

2 **LOS ANGELES, CALIFORNIA**

3 **-oOo-**

4
5 (The following proceedings were held in
6 open court in the presence of the jury:)

7 THE COURT: We remain on the record in the trial
8 matter with all present who were previously present, including
9 the jury as well as the witness.

12:57PM 10 And, Ms. Stanin, you understand you remain under
11 oath?

12 THE WITNESS: Yes.

13 THE COURT: Mr. Blum, please begin your
14 cross-examination. Thank you, Your Honor.

12:57PM 15 **PHYLLIS STANIN,**
16 **CALLED BY THE PLAINTIFF, WAS PREVIOUSLY SWORN.**

17 **CROSS-EXAMINATION**

18 BY MR. BLUM:

19 Q Ms. Stanin, do you see Exhibit 190, 190?

12:58PM 20 A I do.

21 Q Do you remember seeing this during the direct
22 examination?

23 A Yes.

24 Q Wasn't there a white border on the right side of
12:59PM 25 it that had some writing on it?

1 A I'm sorry?

2 Q The ones that you were shown by Mr. Gee,
3 didn't -- did it not have a white border?

4 A Yes. Because it was in a different format.

12:59PM 5 Q All right. And that white border covered up the
6 part where it says Figure 2, AECOM perchlorate and TCE
7 concentration maps?

8 A No. It didn't cover it up. I just didn't have
9 it on the PowerPoint.

12:59PM 10 Q Okay. What does it mean when it says May, June
11 2019?

12 A It means that that was the time period that these
13 field data were measured.

14 Q Okay. Now, is AECOM one of the -- I'm trying to
15 get the words you used -- reputable and qualified firms that
16 Whittaker hired?

17 A Yes. I would say so.

18 Q And they have done more than just one map like
19 this, did they not?

01:00PM 20 A Yes.

21 Q They have done one for every year going back to
22 2013; right?

23 A That's correct.

24 Q But when I reviewed your expert report in terms
01:00PM 25 of the documents that you considered, you only considered the

1 one for 2019, didn't you?

2 A No. That's not correct. I considered all of
3 them.

4 Q Can you go to your list of documents considered,
01:00PM 5 please, in your report. I think it's, for ID purposes, 1312.

6 A Okay. I'm sorry. Where did you want me to go?

7 Q I want you to go to your report. And I think on
8 page 50 of the report -- do you have your expert report up
9 there, ma'am?

01:00PM 10 A I do.

11 Q Okay. 50 starts references cited. Do you see
12 that?

13 A I do.

14 Q And do you recall being asked whether that means
01:00PM 15 these are the only documents that you considered?

16 A Yes.

17 Q And you said "yes"; correct?

18 A Yes. But there are also information within the
19 text of the report that talks about the fact that there was
01:01PM 20 more than one monitoring report.

21 Q I understand that.

22 But in terms of what you considered, you did not
23 consider the monitoring reports with the plume maps that were
24 created by this reputable company for 2013, '14, '15, '16, '17,
01:01PM 25 and '18, did you?

1 A Yes, of course I used them.

2 Q Show me where you -- your references cited there
3 are included.

01:01PM

4 A So I can show you in the text of the report where
5 I talk about that; right?

6 Q All right. Show me where.

7 A Okay. Give me just a second and I will find it.

8 Q Sure.

9 A (Witness reviewing report.)

01:03PM

10 Q Found it yet?

11 A No. I'm not there yet. I'm just trying to walk
12 myself through the process because I don't remember where I
13 specifically referenced that.

01:03PM

14 I found one of the references to it, but we will
15 have to go back and find out where I said this. But I'm on
16 page 39 in Section 7.2.3. The first sentence says,
17 "Incorporating data and analyses described in previous sections
18 in this report and using groundwater elevation data contained
19 within the OU-7 monitoring reports as described above." So I
20 need to find where I described that above.

01:03PM

21 Q Let me ask you a different --

22 A But the fact it says monitoring reports should
23 give you an indication that they're plural.

01:03PM

24 Q Would you agree with me, though, that in your
25 section called "References Cited," you only refer to the 2019

1 AECOM report?

2 A I'm not sure that is exactly right.

3 Q Tell me which other ones you do and in the
4 section that says references cited.

01:04PM 5 A All right. Give me just a second. Let me make
6 sure I didn't record them in some other manner.

7 Q The question only pertains to the references
8 cited section, ma'am.

9 A All right. Well, I'm on the third page of that,
01:04PM 10 so just give me a second.

11 (Witness reviewing report.)

12 Q If I can help, on the first page of the
13 References Cited, there are three references to AECOM.

14 A I know, but oftentimes I would say -- if I got
01:05PM 15 something specifically from Whittaker, I would say that. I did
16 that for the databases. That's the very last entry there. And
17 I thought I might have said something about the monitoring
18 reports there, but I did not.

19 So give me a second. I feel comfortable that I
01:05PM 20 told the reader exactly what I did.

21 Q I'm asking -- only asking about the references
22 cited. I'm not --

23 THE COURT: The Court is going to exercise its
24 discretion under Rule 403 and ask you to ask your next
01:05PM 25 question, Mr. Blum. This has been going on for a bit.

1 Q BY MR. BLUM: Doctor -- I mean, sorry,
2 Ms. Stanin, if you take a look at the plume maps that show the
3 distribution of the perchlorate plumes for 2013 through '18,
4 are they going to look like the one for 2019?

01:05PM

5 A The perchlorate plume maps? Is that what you're
6 asking about?

7 Q It looks like the pink part of Exhibit 190. Is
8 it going to look the same?

9 A No. They all look different.

01:06PM

10 Q Okay. So when you -- now, can you go to the
11 legend or on the left side?

12 A Yes.

13 Q You see where it says, "Estimated TCE
14 concentration contour"?

01:06PM

15 A Yes.

16 Q Okay. All right. What is that?

17 A So the dashed lines are Whittaker's
18 representation of the TCE concentrations at this time period.

19 Q Well, it's not Whittaker. It's this reputable
20 firm's; correct?

01:06PM

21 A It was done by AECOM in a contract to Whittaker.

22 Q Now, can you show the jury on Exhibit 190 where
23 the reputable firm delineated how far the TCE had moved?

24 A No. They don't show how far it had moved. They
25 have contours that go down to five parts per billion, and then

01:07PM

1 they don't show the others.

2 Q All right. Can you show where that is?

3 A Yes, I can.

01:07PM

4 Q Okay. Any further than that, what does that
5 mean?

6 A It means that they didn't follow the flow lines
7 to draw their representation. They only used the data as shown
8 on the map.

01:07PM

9 Q Well, ma'am, you've done a lot of these yourself,
10 these contour lines; correct?

11 A Yes.

01:08PM

12 Q If, for instance, if on -- if you take a look
13 at -- let me see, the three of them at the edge. RMW8, PZ9,
14 and NP.01. If those had shown concentrations of TCE, wouldn't
15 a reputable and qualified firm have extended the contour lines
16 out to that?

17 A But that's not where I'm talking about. I'm
18 talking about along the flow paths that I have delineated using
19 the groundwater flow elevation contours.

01:08PM

20 Q If, indeed, PCE or TCE had been detected in any
21 of those three wells, wouldn't a qualified reputable firm have
22 extended the TCE contour lines out to those wells?

01:08PM

23 A Well, we would have to look at the data. But I
24 think V-201 and V-205 have TCE in them, will have to make sure
25 that was the cases of May and June 2019.

1 Q That's not my question.

2 A If they did -- no, it was your question. You
3 asked me if the -- if they wouldn't have drawn the contours out
4 to where TCE had been detected.

01:09PM

5 Q I will ask it again.

6 If TCE had been detected in any of those three
7 wells, wouldn't a qualified and reputable firm extended the
8 contour lines at least out to those three wells?

01:09PM

9 A Well, yes, of course. But that's not what I'm
10 talking about. Those three wells did not detect TCE.

11 Q All right.

12 A They also didn't detect perchlorate either.

13 Q All right. Let's move on to the -- can we see --
14 I think it was 158. All right.

01:09PM

15 You have control of this. Can you take the red
16 lines off of it?

17 A I would love to. I'm sorry, I don't know if I
18 have control or not.

19 Q You just did.

01:09PM

20 A I didn't do it.

21 Q All right. Saugus 2, has it ever had TCE above
22 an MCL?

23 A No. I don't believe so. I think that's probably
24 true for all of those wells.

01:09PM

25 Q How about above a public health goal for TCE?

1 A I'm sorry, could you ask me that again?

2 Q Do you know what a public health goal is?

3 A I generally know what it is, but I don't know
4 what it is for TCE.

01:10PM 5 Q Have any of the wells, the four wells at issue
6 here, had they ever had concentrations of TCE above an MCL?

7 A Not that I'm aware of.

8 Q And the -- although the concentrations -- at
9 least the highest concentrations of TCE that you talked about
01:10PM 10 in open -- in your direct examination at the site were in the,
11 I believe, 4- to 5,000 part per billion or million?

12 A All of the data that I've presented has been
13 micrograms per liter, so that would be parts per billion.

14 Q Okay. So they are -- what is it? -- multiple
01:10PM 15 times greater than even the MCLs?

16 A Yes. And that's to be expected. It happens a
17 lot with respect to groundwater contamination flowing in the
18 groundwater system.

19 Q All right. Now, let's move on to a couple of
01:11PM 20 specific issues. You talked somewhat about the first wells
21 that were put in in the '80s and the '90s really weren't put in
22 in the right spots; correct?

23 First groundwater wells. You said that they
24 weren't put in in the correct spots to get the information that
01:11PM 25 you thought would be required.

1 A Oh, you must be talking about monitoring wells.

2 Q Yes.

3 A Not water supply --

4 Q I'm sorry. You're right. Monitoring wells.

01:11PM 5 A Yes. That is correct.

6 Q Did you review the documentation and the
7 information that was available to the agencies that would
8 regulate the area and Whittaker at the time these wells were
9 put in?

01:11PM 10 A I reviewed the information of the wells that were
11 available from the time they were put in, yes.

12 Q The results or the actual orders of things that
13 were in effect?

14 A I'm sorry. I'm not clear what you're trying to
01:12PM 15 ask me. Are you asking me why the wells went in?

16 Q You know what? Isn't it correct that, when you
17 start a monitoring program, that it's what's called an
18 intuitive process because you don't really know what you're
19 going to find until you start putting the wells down there?

01:12PM 20 A I don't know if I would call it "intuitive," but
21 it's interactive. I think that's what you mean.

22 Q Right.

23 So the first well may not find it, and then you
24 work with the agency and then you put it in another spot until
01:12PM 25 you get the wells at the good places; right?

1 A That's generally the process. But you need to be
2 able to know what you need to do next as soon as you put
3 something in that doesn't work.

4 Q Right now -- I want to move to the next issue,
01:12PM 5 and then we're going to -- and that is Table 5. Table 5 was
6 the maximum concentrations that were found at the different
7 onsite wells; correct?

8 A Yes. That's correct.

9 Q Why use maximum?

01:13PM 10 A Because one of the things that you're trying to
11 do when contaminants have already been migrating prior to you
12 being able to actually measure the concentrations and track the
13 plumes as they move down the groundwater system, one of the
14 things that you're trying to do is to determine how much has
01:13PM 15 gone past that well.

16 And so the maximum concentration gives you the
17 opportunity to see that there's been a plume centerline, for
18 example, that has gone by that well at that time. So it gives
19 you a better understanding of what the extent of the
01:13PM 20 contamination is, certainly through the various aquifers which
21 was one objective of looking at the concentrations.

22 And then another objective of that process is to
23 better understand what has gone by or what has been seen in the
24 monitoring wells at any given time so that that can -- it's one
01:14PM 25 piece of the puzzle that you need to sort of put the puzzle

1 together.

2 Q But it's not the full puzzle, is it?

3 A Well, no. It's not the only thing I used.

4 Q Don't you also want to know what the trend at

01:14PM 5 those wells has been, for instance? Isn't that a piece of

6 information that you would want to know?

7 A We did look at the trends, and --

8 Q That is a -- trends is a piece of information you

9 would want; correct?

01:14PM 10 A We did look at that. And I actually put that in

11 the expert report. It's on three exhibits as an example.

12 Q Wouldn't you also want to know where the

13 concentrations are today?

14 A We do know where the concentrations are today.

01:14PM 15 Q Well, if we take a look at -- what was the
16 highest concentration that you found at any of the wells?

17 THE COURT: For what chemical?

18 MR. BLUM: TCE, onsite.

19 THE WITNESS: So I think we have talked about

01:15PM 20 this before. It was in some of the -- if you're asking which
21 wells --

22 Q BY MR. BLUM: I just want to know the number.
23 What is the highest number?

24 A Oh, I'm sorry. 4,700 micrograms per liter.

01:15PM 25 Q What year was that?

1 A I don't have a year to that, but we could look
2 that up. I don't have that memorized.

3 Q So would it matter what year it was?

4 A For what purpose?

01:15PM 5 Q Well, for instance, if it was 20 years ago and
6 we -- it never had a concentration at any of these offsite
7 wells at or above the MCLs, could it be that whatever danger
8 that posed is gone?

9 A Well, you don't have enough offsite wells to even
01:15PM 10 say that, number one. And, number two, that was not a blip in
11 time. Those wells that were on the area -- and I can draw
12 this, actually. I don't have this shown on this particular
13 map. But the wells that had those highest concentrations are
14 in this area. It wasn't a one-time detection.

01:16PM 15 Q There's now a remedial groundwater extraction
16 system on the site; correct?

17 A Yes. I believe it's operating now.

18 Q Now, with the system in place -- by the way, in
19 your report and in your deposition, you never rendered an
01:16PM 20 opinion, did you, as to what future concentrations at the
21 Saugus 1, Saugus 2, V-201, or V-205 well would be for TCE, did
22 you?

23 A Are you talking about a concentration in the
24 future?

01:16PM 25 Q In the future. You never rendered an opinion on

1 that issue, did you?

2 A I don't think anybody ever asked me about what
3 the concentration would be in the future.

01:17PM

4 Q Did you render an opinion on that issue in your
5 report?

6 A Not in my report, no.

7 Q And in your deposition, you were asked at the end
8 of the deposition, weren't you, are these all your opinions?
9 And you said "Yes"; correct?

01:17PM

10 A I recall that, yes.

11 Q And in your deposition, you never rendered an
12 opinion on what the future concentrations would be for the VOCs
13 at the four wells in question, did you?

01:17PM

14 A No. It wasn't part of the scope of my expert
15 report.

16 Q Okay. Good.

17 All right. Let's go to just some general issues,
18 ma'am. Now, you've worked with a company called -- is it
19 called Todd Engineering now or just Todd?

01:17PM

20 A The company was formed by David Keith Todd. So
21 the actual formal official name of our firm is David Keith Todd
22 Consulting Engineers, Inc. We were doing business as
23 Todd Engineers for a while, and then we found there was a
24 shipping company called Todd Engineers that we kept getting
01:18PM 25 calls for. So we modified our name, and we're now doing

1 business as Todd Groundwater.

2 Q And in this case, you have actually prepared
3 three reports; correct?

4 A Three expert reports, correct.

01:18PM 5 Q And Mr. Todd prepared one also; correct?

6 A Well, I was counting that one as one of the
7 three. I assisted Dr. Todd with the first report.

8 Q And you basically have accepted his conclusions
9 in his report, have you not?

01:18PM 10 A Yes. I worked on it.

11 Q And one of his conclusions was that perchlorate
12 has been used at the site at least since the mid 1940s;
13 correct?

14 A I would assume so. That sounds right. But I --
01:18PM 15 I should check that. I'm not going to represent that it says
16 that without looking at it.

17 Q But that sounds like a correct statement?

18 A That sounds correct to me.

19 Q You have expended 4- to 500 hours in preparing
01:19PM 20 your rebuttal report; correct?

21 A I can't imagine I spent 400 hours on the rebuttal
22 report.

23 Q Well, combined. Combined, ma'am.

24 A I don't recall the number. But if you have
01:19PM 25 information for that, then I will go with you.

1 Q Can you put any parameters on how much time you
2 have spent on the case?

3 A Gosh, I haven't thought about that in a long
4 time.

01:19PM 5 Q But you know how much money you have been paid by
6 the plaintiffs for the work that you did in preparing your
7 reports and getting ready and testifying today?

8 A I'm sorry. Just for the testifying today?

9 Q And the -- the total. All the work your firm has
01:19PM 10 done as an expert, how much have you been paid?

11 A I don't know the answer to that.

12 Q Okay. Now, let's talk about perchlorate
13 generally. Would you agree that the offsite impacts -- let me
14 rephrase.

01:20PM 15 Would you agree that perchlorate's impacts on
16 offsite water wells was not foreseeable until 1997?

17 A Yes, because we weren't sampling for it before
18 1997.

19 Q And one of the reasons you weren't sampling for
01:20PM 20 it is because it wasn't recognized as a problem for groundwater
21 until 1997; correct?

22 A There had not yet been established an MCL until
23 that time.

24 Q Because nobody thought to -- that it was a
01:20PM 25 problem; correct?

1 A I don't know about that. I mean, perchlorate is
2 salts, and so salts have been an issue for a very long time.
3 But it didn't have an MCL at that time. Let's just leave it at
4 that.

01:21PM 5 Q Well, in fact, before 1997, there was not even a
6 way to measure it, was there?

7 A That is actually incorrect. I have seen
8 perchlorate concentrations back to the '50s.

9 Q All right. If we could move to the site history,
01:21PM 10 please.

11 Would you agree that TCE has been disposed of or
12 used at the site for at least 80 years?

13 A We don't know the exact time period, but we do
14 know that TCE was disposed of at the site.

01:21PM 15 Q Didn't you in your report use for at least
16 80 years?

17 A I don't know. Can you point me to --

18 Q Yes. Page 15. First full paragraph, the
19 sentence starting, "Giving its rise in the United States..."

01:22PM 20 A Well, it doesn't say that it's true. If I could
21 read those two sentences for the record, it might be clearer.

22 Q Sure.

23 A So the paragraph -- the first two sentences read:
24 "The first use of VOCs on the property has not been documented.

01:22PM 25 But U.S. manufacturing of TCE, the most prevalent VOC detected

1 in groundwater, dates back to the 1920s, including uses of
2 degreasing solvent and its fire retardants. Given its rise in
3 the United States production in the 1940s and its widespread
4 use in the defense industry, it seems likely" -- "it seems
01:22PM 5 likely that TCE has been used and disposed of on the property
6 for about 80 years."

7 Q When you say "it seems likely," does that mean
8 it's more probable than not?

9 A Yes. That's what "likely" means.

01:23PM 10 Q So in your opinion, it's more probable than not
11 that TCE had been used and disposed of at the site for over
12 80 years; correct?

13 A Well, I don't have this as a specific opinion
14 stated. This is background information on the site. But yes,
01:23PM 15 it does seem likely that TCE may have been -- was likely. I
16 will stick with that. Was likely used for about 80 years.

17 Q More probable than not; correct?

18 THE COURT: Ask your next question.

19 MR. BLUM: All right.

01:23PM 20 Q If we go back, at some point in time, did you
21 state whether or not the property had been used for the
22 manufacture of fireworks?

23 A Yes, I did state that.

24 Q And if you can look at table 2, what are the
01:24PM 25 years that fireworks manufacturing would have been done?

1 A 1936 to 1942.

2 Q All right. Now, when you took a look at the
3 site, did you find any evidence that there were remnants of
4 fireworks in some of the landfills?

01:24PM 5 A I can't remember specifically if that was the
6 case.

7 Q Well, if you go to page 18 of your report, ma'am,
8 do you see where it says "solid wastes"?

9 A Yes, I do.

01:24PM 10 Q Do you see where it says "trenching and testing
11 at those 29 sites indicate disposal of nonhazardous and
12 hazardous materials including fireworks"?

13 A Yes. Fireworks, spent missile and rocket
14 casings, crushed and intact drums, powders, detonators,
01:25PM 15 sandblast residue, propellant, red phosphorous, sewage sludge,
16 sludge, and various other stained materials. So I didn't
17 remember that one.

18 Q Now, wasn't there also fireworks specifically
19 found in the Hula Bowl?

01:25PM 20 A I don't recall.

21 Q Now, in your report didn't you state that in
22 the -- I'm sorry. Let me get to the right spot -- that in the
23 late 1960s there was a changeover by Whittaker from TCE to TCA?

24 A I do recall that sentence. That came directly
01:26PM 25 out of the Acton-Mickelson remedial investigation report, and I

1 practically plagiarized that paragraph because it was according
2 to Bermite employees. So I don't think even Acton-Mickelson
3 knew that directly firsthand.

01:26PM 4 Q Do you ever put things in your report that you
5 don't believe to be true?

6 A Well, you have --

7 Q That's a statement.

8 The question is do you put things in your report
9 that you do not believe to be true?

01:26PM 10 A No. Of course not.

11 Q All right.

12 A But --

13 Q I'm done with my question.

14 A I just would like to explain.

01:26PM 15 THE COURT: You will have an opportunity on
16 redirect.

17 THE WITNESS: Thank you.

18 Q BY MR. BLUM: I want to talk about -- generally
19 about contamination in the groundwater. In the offsite
01:27PM 20 groundwater, was there contaminants found that you believe
21 could not have been from the Whittaker site?

22 A I can't recall. There were some -- there were
23 some contaminants that I didn't do any kind of detailed
24 tracking on because their concentrations were so low.

01:27PM 25 Saugus 1, in particular, I think saw some additional VOCs in

1 addition to TCE and PCE, but their values were not quantifiable
2 by the lab they were so low. So there wasn't a lot of
3 information that I could use for trying to track those
4 contaminants.

01:27PM

5 Q For instance, do you recall whether or not
6 benzene or ethyl benzene or toluylene were found in the
7 groundwater?

8 A In what well?

01:28PM

9 Q In any of the offset wells installed by Whittaker
10 or any of the groundwater wells that are the subject of this
11 case.

12 A I don't recall, but we could look that up. But
13 it's in the database.

14 Q All right. Let's move on.

01:28PM

15 Let's take a look at Exhibit 179, please.

16 (Marked for identification and received
17 into evidence Exhibit No. 179.)

18 Q BY MR. BLUM: Now, Exhibit 179 is an AECOM TCE
19 concentration map, again, from May of 2019; correct?

01:28PM

20 A Yes.

21 Q This is for basically aquifer S-3A; correct?

22 A That's correct.

23 Q And, again, is it correct that it shows a TCE
24 contours not extending off the Whittaker site; correct?

01:29PM

25 A That's correct.

1 MR. BLUM: All right. If we can go to
2 Exhibit 180.

3 (Marked for identification and received
4 into evidence Exhibit No. 180.)

01:29PM 5 THE COURT: Please make sure that, if you're
6 referring to an exhibit that hasn't been received, that you
7 follow the procedure that was previously stated.

8 MR. BLUM: 179 and 180 are stipulated.

9 Q Again, this is for a different aquifer, and it
01:29PM 10 also shows TCE concentration maps not exiting the Whittaker
11 site; correct?

12 A No. That's not correct.

13 Q All right. Does it show the contours stopping
14 within the Whittaker site?

01:29PM 15 A The first mistake is that you said it was a
16 different aquifer. It's the same aquifer.

17 Q Let's move on. Let's go to 182.

18 (Marked for identification and received
19 into evidence Exhibit No. 182.)

01:30PM 20 Q BY MR. BLUM: What is 182?

21 A 182 is the water level contour that we saw from
22 May 2019 from the Whittaker monitoring report, and there are
23 two areas of TCE contamination that are higher in concentration
24 than 5 PPB. Recall that the concentrations, as you mentioned
01:30PM 25 earlier in the water supply wells, were higher than 5 PPB. So

1 it doesn't mean that TCE is not in those wells at this time.

2 Q But the high concentrations or at least above the
3 MCLs on the site don't extend beyond the site; correct?

4 A But that's an interpretation.

01:30PM 5 Q If you look at the contour lines -- do you see
6 the contour line for 5 parts per billion?

7 A Yes, I do.

8 Q Other than the corner between OU-4 and OU-3, it's
9 contained at the site; correct?

01:31PM 10 A That's generally correct. If I can just draw, I
11 can pull that TCE contour in that direction.

12 Q All right. But that's not what AECOM did.

13 A That's because it's their interpretation.

14 Q Okay. Now, if we go further towards the top,
01:31PM 15 there's another contour; correct?

16 A I'm sorry, please. I was distracted. Would you
17 mind repeating?

18 Q If we go to the top above V-201 and V-205, there
19 is another contour; correct?

01:31PM 20 A Correct.

21 Q And can you put a circle around that, please?

22 A Yes. Of course.

23 (Witness drawing.)

24 The contour does this, but the contour could do
01:31PM 25 this.

1 Q Just the lines that they drew. Not of your
2 drawing.

3 A You can see the lines they drew from the green.

01:31PM

4 Q Can you please put a circle around the lines that
5 AECOM drew?

6 A Yes. Of course. I'm sorry. I don't think I
7 have control of the red. I'm so sorry. There we go.

8 That's what you wanted me to do?

01:32PM

9 Q Yep. Now, between where the concentration is
10 above 5 at the Whittaker site, there is how much space until
11 you get to other new concentrations that are above 5 parts per
12 billion?

13 A Well, there aren't many wells; right. There are
14 no wells at all.

01:32PM

15 Q Ma'am, it's not my question.

16 A I'm sorry. Please.

17 Q How much space?

01:32PM

18 A Well, let's -- let's say you can use this as
19 about 1,500 feet. So let's say that they have -- there is my
20 thousand. I will use this. A little over a mile, I think.

21 Q Okay.

22 A But without data in between.

23 Q Well, isn't there -- isn't there a -- well, never
24 mind.

01:33PM

25 The wells that are on the furthest top, isn't it

1 true that those are what's called the DW and Mall well
2 clusters?

3 A Generally. I think it's DIW but close.

4 Q Okay. And you haven't looked for or at whether
01:33PM 5 or not there's a source for the DIW and Mall well clusters
6 independent of Whittaker, have you?

7 A Well, I was focusing on the pathways to the water
8 supply wells, so the DIW wells were less of a concern.

9 Q My question is you didn't look at the sources for
01:33PM 10 the DIW or Mall wells, did you?

11 MR. GEE: Objection. Outside the scope of
12 assignment.

13 THE COURT: Overruled.

14 You can answer.

01:34PM 15 THE WITNESS: I didn't focus in on what DIW-1,
16 for example, is and then began to compare that to everything in
17 the same way I did the water supply wells because the scope was
18 to look at the water supply wells.

19 Q BY MR. BLUM: In other words, you didn't think it
01:34PM 20 was your job or part of your task to determine whether or not
21 there was a source of TCE outside of the Whittaker site?

22 A Well, I know there were other sources. That's
23 not the point.

24 Q Okay. What are those other sources?

01:34PM 25 A I think that there is a site with TCE and it's

1 near the Saugus 1 well SIC.

2 Q All right.

3 A That was in a lot of the expert reports
4 associated with this, but the DIW wells were not part of the
01:35PM 5 focus of what I was trying to do.

6 Q What's the zone of influence for -- by the way,
7 if we're talking about a well and you say the zone of influence
8 for a well, what does that mean?

9 A I'm not 100 percent sure what you mean by that.

01:35PM 10 Q Did you ever see a report that talked about V-201
11 and, when it's pumping the area, that the pumping impacts?

12 A Are you talking about capture zones?

13 Q Capture zones. What's a capture zone?

14 A A capture zone is when a well is pumping.

01:35PM 15 Remember the circles that we saw for when a pump well was
16 pumping and how that circle was skewed upgradient. So that
17 gives that well the opportunity to capture water that's coming
18 down from the upgradient area. And so there are -- I'm going
19 to say there are at least maybe eight or ten different versions
01:35PM 20 of capture zones that have been done for this site for the
21 variety of these wells for different reasons over time. And
22 so, yes, I have seen a lot of the capture zones.

23 Q How about for specifically V-201?

24 A Yes. I have seen capture zones for V-201, at
01:36PM 25 least four or five of them.

1 Q Do you know an individual named Meredith Durant
2 who works for Kennedy Jenks?

3 A Yes. I'm smiling because you asked me that in my
4 deposition.

01:36PM 5 Q You're aware she is another reliable and
6 reputable expert; correct?

7 A Yes, she is. She's an environmental engineer
8 with Kennedy Jenks Consultants.

9 Q In the capture zones that she prepared and
01:36PM 10 submitted to the DDW, didn't the capture zones include the DIW
11 and Mall wells?

12 A Oh, I know what you're talking about. That's for
13 the 97-005 report.

14 Q Yes.

01:36PM 15 A Yeah. So that capture zone is a future capture
16 zone. That hasn't happened yet.

17 Q Okay. While V-201 was operating, did the capture
18 zones include the Mall wells and the DWO clusters?

19 A No. I don't think so.

01:37PM 20 Q All right. I want to move on, and I want to talk
21 about how stuff gets to groundwater.

22 Have you looked at how deep the groundwater is
23 from the surface at the Whittaker site -- at the site?

24 A Yes. It varies over the site quite a bit, and it
01:37PM 25 varies over time.

1 Q And it could be up to 7- or 800 feet; correct?

2 A That seems deeper than I thought. Where is it
3 700 feet?

01:37PM

4 Q How about in the area of Building 317? How far
5 is it from the surface to the groundwater?

6 A I don't know beneath the impoundment. I didn't
7 think it was 700 feet, but certainly it's several hundred feet.

01:38PM

8 Q And in order for something that is released into
9 the impoundment to get to the groundwater, it has to go through
10 the soil; correct?

11 A It goes through the sediment. So the sediment
12 beneath the Whittaker site consists of --

13 Q That's not my question.

01:38PM

14 Whatever it's made up of, it has to go through
15 the sediment; correct?

16 A It goes through the sediment, yes. Not the
17 soils.

18 Q And the -- how quickly it moves through that
19 sediment is based on numerous different variables; correct?

01:38PM

20 A Yes.

21 Q Now, what does it mean if the sediment is
22 heterogeneous?

01:38PM

23 A Most geological formations are relatively
24 heterogeneous, and it simply means that there is variety or
25 variability of properties across the aquifer.

1 Q In terms of sediment, doesn't it mean that
2 something -- just because you know what it's like in one part
3 doesn't mean it's going to be like that in another part.

4 A That's correct.

01:39PM

5 Q And it varies all through the thousand acres that
6 we're talking about here.

7 A It does vary.

01:39PM

8 Q All right. And because it's heterogeneous and
9 because we haven't done all the testing for all the variables,
10 it's true that at least as of your deposition no one has
11 determined how long it would take to move from the surface to
12 the groundwater.

01:39PM

13 A Yeah. I think that's right because we looked in
14 all of the Whittaker reports. I was really surprised to see
15 that there had been no vadose zone study, unsaturated zone
16 studies in any of the Whittaker reports.

01:39PM

17 Q So as of the -- at least as of the deposition,
18 there is no testimony or no studies of how long it would have
19 taken the perchlorate or the VOCs to move assuming there was a
20 leaking of the 317 impoundment to the groundwater below the
21 impoundment; correct?

22 A We can make estimates, but there have been no
23 studies that I have seen.

01:40PM

24 Q All right. Now, the -- you made certain
25 estimates, did you not, about how long it would take for -- or

1 how long it's been that the VOCs had been in the groundwater
2 and how long they have had to migrate, didn't you, in your
3 report?

01:40PM 4 A I have a section on groundwater velocities and
5 travel times.

6 Q And didn't you conclude that it would take
7 between -- it would take between 50 and 80 years -- the VOCs
8 have had 50 to 80 years to migrate?

9 A No. That was not my conclusion.

01:40PM 10 Q Do you recall using the word 50 to 80?

11 A So I think you're talking about table 8, and we
12 mentioned that briefly previously. And on table 8 we have the
13 data -- the field data that Whittaker collected and the water
14 supply agencies collected that relate back to those groundwater
01:41PM 15 velocities. And I think I'm clear in table 8 that there's a
16 variety of velocities that can be calculated depending on
17 whether you are using onsite or offsite data and also depending
18 on which aquifer you're actually looking at.

19 Q Let's go to a table. I think it was table 8.

01:41PM 20 A That's correct.

21 Q Table 8, at the end of the day, you have a bulk
22 average of .87; correct?

23 A I don't know about the end of the day, but
24 there's a .87 on my table because that was an average of some
01:41PM 25 of the data that are on the table.

1 Q All right. And if you go to the next page under
2 the next section 7.4.4.2 under travel times -- are you with me?

3 A I'm on the next page, yes.

01:42PM

4 Q All right. The last sentence of the first
5 paragraph you use .87 feet as the velocity in your predictions;
6 correct?

7 A So I'm sorry. Next page the last sentence says
8 "The bulk groundwater velocity is 0.87 feet per day which is
9 similar to the offsite individual HS used velocities."

01:42PM

10 Q I'm looking at page 42 of your report.

11 A I am on 42.

12 Q Section 7.2.4.2. Do you see that?

13 A I do see that.

01:42PM

14 Q Using an estimated average groundwater velocity
15 of .87 feet per day, that's the one you used; correct?

16 A I don't know about that's the one I used. That's
17 the one I used in that sentence, and that's only for our
18 establishment of an extreme case using a conservative number to
19 see if it was going to be a controlling factor.

01:43PM

20 Q All right. Well, if you go to the next page, the
21 first paragraph you do refer to it as a conservative average;
22 right? At the bottom of the first paragraph?

23 A Yeah. And read that sentence. You know, even
24 with the conservative average linear groundwater velocity of
01:43PM 25 0.87, that really was the extreme case.

1 Q Well --

2 A If I could explain how this fits together.

3 Q Ma'am. Ma'am.

4 A I'm sorry?

01:43PM 5 Q Do you ever refer to it as an extreme case?

6 A I refer to it as the conservative case.

7 Q All right. Now, if you go further down, you see
8 the paragraph that starts "Actual retardation"?

9 A Yes.

01:43PM 10 Q Now, at the end of that paragraph, don't you
11 state, "Contamination from the Whittaker site could have
12 impacted water supply wells over a 50- to 80-year period"?

13 A Again, this --

14 Q Isn't that what you said?

01:44PM 15 A That is what the sentence said but --

16 Q All right. Now --

17 A It's cherry-picking the information.

18 Q Can you show me in your discussion --

01:44PM 19 THE COURT: Mr. Blum, a little bit lower, a
20 little bit softer.

21 MR. BLUM: Sorry, Your Honor.

22 Q Ma'am, can you show me in your discussion of the
23 time where you use any number other than .87 feet per day?

24 A Yes. Of course.

01:44PM 25 Q Sure. Show me where. In that section show me,

1 please.

2 A Page 42, the last sentence -- the last paragraph
3 in that upper section reads as follows: "Using an average
4 linear groundwater velocity from onsite areas alone, 5.6 feet
01:44PM 5 per day, would suggest that contaminants could migrate 3,000
6 feet in just 1.5 years allowing contaminants to migrate from
7 source areas to the site boundary."

8 Q But we have -- the wells here are partly onsite
9 and partly offsite; correct?

01:45PM 10 A They are.

11 Q And when you -- and at least, for instance, if we
12 take a look at V-201, isn't V-201 mostly offsite?

13 A Yes. Let me explain.

14 Q Isn't V-205 mostly offsite?

01:45PM 15 A I can see where you're going, so let me explain.

16 Q Let's go on to the next issue.

17 THE COURT: Ms. Stanin, he doesn't want you to
18 explain. You will have an opportunity -- and if he does, he
19 will let you know. You will have an opportunity to explain if
01:45PM 20 Mr. Gee thinks it's appropriate.

21 THE WITNESS: I'm sorry. Thank you.

22 THE COURT: Just listen to his questions. Answer
23 the questions, please.

24 THE WITNESS: Thank you.

01:45PM 25 Q BY MR. BLUM: Now, how far is it from the

1 Hula Bowl to S-1?

2 A I'm sorry, to -- which part of the Hula Bowl?

3 Q Well, I think you used the word, by the way, 5-
4 to 6,000 feet on page 43.

01:46PM

5 A And so that number varies depending on where you
6 are. I'm not sure exactly what I was doing at that moment.
7 But the Hula Bowl ravines and the Hula Bowl source areas are a
8 little bit different.

01:46PM

9 Q Doesn't it say "Distances to the OU-4 Hula Bowl
10 ravines are shorter, about 5- to 6,000 feet"?

11 A They are shorter, yes.

12 Q And it was shorter than the distances from the
13 Burn Valley; correct?

14 A That's correct.

01:46PM

15 Q Have you actually -- have you actually calculated
16 out, given percentages of how far -- how much onsite versus how
17 much offsite there is -- how long it would have taken for
18 contaminants to have moved from one location to another?

01:47PM

19 A Part of the reason that that hasn't been done is
20 because the offsite information comes from water supply wells
21 which actually average all of the aquifers. So those onsite
22 numbers, even though they say "onsite," that just means that's
23 where the data were collected from. And because they are
24 aquifer specific, that's probably the better numbers with

01:47PM

25 respect to contaminant travel than any of the bulk numbers that

1 combine all the aquifers together.

2 Q So in the end of the day, is there enough data to
3 do the calculation to determine how long it would have taken
4 for just the groundwater part of it to move from the
01:47PM 5 Burn Valley to S-2?

6 A Yes. I think there's enough information to do
7 some estimations and approximations. And my order of magnitude
8 estimate here was only to see if it was a controlling factor,
9 and then the other expert that's also involved in this case is
01:48PM 10 doing a more detailed assessment, a more deep dive with respect
11 to the travel time issues.

12 Q And when you say a controlling factor, the
13 question you were trying to answer was, given the time periods
14 in which there have been releases at the site, was there
01:48PM 15 sufficient time; correct?

16 A Yes.

17 Q You were not trying to say, "Given the time
18 period that Whittaker has occupied the site was there enough
19 time," were you?

01:48PM 20 A I was mainly interested in the Whittaker site.

21 Q But I'm talking about the site as general and not
22 the time period that Whittaker as a company occupied the site;
23 correct?

24 A That's correct.

01:48PM 25 Q So you're not saying there was sufficient time

1 for the time period that Whittaker was the operator of the site
2 for material to have migrated, are you?

3 A Well, I think there was, but that isn't what this
4 is talking about.

01:49PM 5 Q Is that in your report? You don't state that in
6 your report, do you?

7 A No. Because --

8 Q Thank you.

9 All right. Now, let's move on. Let's move on to

01:49PM 10 Saugus 1.

11 If we can get 158 back up, please.

12 Ma'am, can you show us where -- I'm sorry. Where
13 Saugus 1 and 2 are?

14 A Saugus 1 and 2 are here and here, and they are
01:49PM 15 labeled.

16 Q Okay. Do you recall when the extraction wells
17 were put -- were operating for Saugus 2?

18 A I'm sorry. I don't understand the question.

19 Q Saugus 2 is actually extracting water from the
01:50PM 20 aquifer; correct?

21 A Yes. It's a pumping well.

22 Q When was that pumping well put online?

23 A Soon after -- probably within a year after it was
24 installed.

01:50PM 25 Q 2010?

1 A Oh, you're talking about -- okay. So it was put
2 online right after it was installed, and I'm going to say that
3 was 1989ish, the late '80s, I think. So that well was pumping
4 from the time it was installed until it became contaminated
5 with perchlorate.

01:50PM

6 Q All right. And it went offline; correct?

7 A Because they couldn't operate the well because it
8 was contaminated.

9 Q And after the Saugus perchlorate treatment
10 facility was built, it went back online; correct?

01:50PM

11 A Yes. It was down about 12 years, I think.

12 Q When did it come back online?

13 A Sometime in 2010.

14 Q All right. And since then it's been pumping
15 water from the aquifer; correct?

01:51PM

16 A That's correct.

17 Q And it's also been acting as what's called a
18 containment well; correct?

19 A It is acting as a containment well. I'm not sure
20 who plans it, but yes.

01:51PM

21 Q Can you tell the jury what a containment well is?

22 A Yes. Of course. So recall we talked about what
23 happens in a pumping well, that it makes this kind of
24 depression, and water from kind of a large area around the well
25 goes into that well. And so, because of that well, now it's

01:51PM

1 sort of gathering water around it. If you go upgradient, that
2 well sees water coming toward it, and even water coming toward
3 it over here will get captured by it. Water coming over here
4 will get captured by it. So it captures a larger area.

01:51PM

5 Remember, we talked about how it captures a
6 larger area than a monitoring well would capture. And so if we
7 extend that capture upgradient, we can say anything flowing
8 downgradient and hitting that circle, that's going to go in
9 that well. So that's what we call a capture zone.

01:52PM

10 MR. BLUM: Okay. If we could put up Exhibit 169,
11 please, which is stipulated into evidence. It's figure 18 from
12 your -- you know what, do -- do this one. Sorry.

13 (Marked for identification and received
14 into evidence Exhibit No. 169.)

01:52PM

15 Q BY MR. BLUM: This is from your report, correct?

16 A Yes, it is.

17 Q All right. Now, would you agree with me that, in
18 terms of Saugus 1 and Saugus 2, the three main VOCs found in
19 order of significance is TCE, PCE, and 11-DCE; correct?

01:52PM

20 A For the VOCs?

21 Q Yes.

22 A Yes.

23 Q What is 11-DCE?

24 A You mean its molecular structure?

01:53PM

25 Q Is it related to TCE or PCE?

1 A No. It's a degradation product of 1,1,1-TCA.

2 Q Is it also through a mechanical degradation
3 related to TCE?

01:53PM

4 A I have seen the literature on that. I can't give
5 you an opinion on that.

6 Q By the way, TCA, has it been detected in Saugus 1
7 or 2 or V-201 or 205?

8 A No. I don't think so.

01:53PM

9 Q Now, isn't it correct that you don't know what
10 the source is of -- well, at least at your deposition you
11 didn't know what the source was of the 11-DCE found in Saugus 1
12 and Saugus 2?

01:54PM

13 A I haven't made a determination about those
14 concentrations because they're just too low to even be
15 quantified. They're difficult to track.

16 Q Didn't you say in your deposition the reason you
17 did it -- didn't do it was because it just wasn't part of your
18 job?

01:54PM

19 A Well, it wasn't in the pathway scope
20 specifically, but that's part of the reason because it's just
21 too low to be trackable.

22 Q Right. And so it would be correct that sitting
23 here today you don't know the source of the DCE found in
24 Saugus 1 and 2?

01:54PM

25 A That's correct. I haven't made that

1 determination.

2 Q So you can't say it was Whittaker, can you?

3 A I can't say one way or the other. I know
4 Whittaker detected 11-DCE onsite.

01:55PM 5 Q Well, if we could go to -- actually, your
6 Exhibit 169. And you see in the bottom right-hand corner there
7 is the highest concentration maps for DCE; correct?

8 A Correct.

9 MR. BLUM: Can you blow that up?

01:55PM 10 THE WITNESS: I don't know.

11 MR. BLUM: I'm talking to --

12 THE WITNESS: Sorry.

13 MR. BLUM: It is okay.

14 Q Now, all those white dots, what do they mean?

01:55PM 15 A Those are wells in which 11-DCE was not detected.

16 Q So other than the northern part of the site and
17 the -- I guess it would be the southern part of the site, there
18 is no DCE found in any of the wells, is there?

19 A That's correct. DCE had not been detected in the
01:55PM 20 Hula Bowl ravines or the Hula Bowl source area.

21 Q Well, isn't there also -- where is Saugus 1 and
22 Saugus 2?

23 A They're here and here.

24 Q All right. So based on that, wouldn't you
01:56PM 25 conclude that there is no evidence to support the fact that

1 Whittaker is the source of the DCE in Saugus 1 and Saugus 2?

2 A Other than pathway.

3 Q Well, just because there's a pathway doesn't mean
4 that something has taken the pathway; correct?

01:56PM 5 A That's why I didn't determine it as the source.

6 Q Well, did you look for what could be the source?

7 A I didn't make a determination for anything that
8 wasn't quantifiable above the lab reporting limits.

9 Q Well, within the wells, within Saugus 1 and
01:56PM 10 Saugus 2, wasn't there quantifiable amounts of DCE?

11 A I don't recall that.

12 Q Ma'am, if there is a source of DCE independent of
13 Whittaker, could that source also be a source of TCE?

14 A It could.

01:56PM 15 Q You don't know; correct?

16 A That's correct.

17 Q So sitting here today, you can't tell me whether
18 or not there are other sources of TCE that could have
19 contributed to the TCE found in Saugus 1 or Saugus 2, can you?

01:57PM 20 A Well, if you want to try to explain what other
21 sources other than the ones we've looked at. We have looked at
22 many of the sources in this area. We did in 2002. I think
23 there was an, I don't know, 20 or so sources we looked at then,
24 and they couldn't have been the source. And we looked at
01:57PM 25 additional sources in 2006. I didn't look in additional

1 sources for the expert report that I'm working on.

2 Q Ma'am, aren't there often the cases where you
3 find contamination in the groundwater and you just can't figure
4 out where it comes from?

01:57PM

5 A I have to say I don't think I have worked on a
6 site where I couldn't figure out where something comes from.
7 It depends on the information and data, I suppose. I'm having
8 trouble thinking about that.

01:58PM

9 Q Well, haven't you said repeatedly that you don't
10 believe there is sufficient characterization of the
11 contamination offsite?

12 A Absolutely. I think that's right.

13 Q Couldn't that be the explanation as to why we
14 haven't found that source of DCE?

01:58PM

15 A That's a possibility. But I'm just thinking
16 about the data that we know now. It's hard to say that there
17 could be something that's there that we don't know anything
18 about.

19 MR. BLUM: Could we go to figure 186, please?

01:58PM

20 I'm sorry. Exhibit 186 which is stipulated into evidence.

21 (Marked for identification and received
22 into evidence Exhibit No. 186.)

23 Q BY MR. BLUM: What is Exhibit 186?

01:58PM

24 A This is a representation of one of the capture
25 zones that I was just talking about. I could probably have

1 explained it a lot better if I had been looking at this. Maybe
2 we could get rid of those red -- thank you.

3 This is a capture -- these are capture zones for
4 pumping wells Saugus 1, Saugus 2, NC-13, and NC-12.

01:59PM 5 Q For instance, if you take a look at the
6 capture -- this is also an exhibit from your report; correct?

7 A Yes. But it was prepared by Whittaker.

8 Q Well, I would assume, if you included it in your
9 report, you would think it is reliable; correct?

01:59PM 10 A It is reliable for the purposes that it's used.

11 Q So if you take a look at the capture zone for
12 Saugus 2, what we are looking at is basically those black lines
13 that begin in the circle at Saugus 2 and extend through the
14 Whittaker site; correct?

01:59PM 15 A That's correct.

16 Q All right. And those black lines encompass the
17 Hula Bowl; correct?

18 A Correct.

19 Q They also encompass the Burn Valley; correct?

01:59PM 20 A Correct.

21 Q So according to this, any contamination in the
22 Burn Valley or in the Hula Bowl is going to be drawn towards
23 and into Saugus 2.

24 A Correct.

02:00PM 25 Q So that would include, for instance, VOCs; right?

1 A Yes.

2 Q It would include -- which includes TCE and PCE;
3 correct?

4 A Correct.

02:00PM 5 Q If TCA is there, it would include TCA; correct?

6 A Correct.

7 Q And it would include perchlorate?

8 A Yes.

9 Q And it would -- and it also -- it is drawing it
02:00PM 10 not only towards Saugus 2 but also towards the three monitoring
11 wells that are on the very, very west end of the Whittaker
12 site; correct?

13 A Correct.

14 Q All right. And one of those would be MP1-01
02:00PM 15 which is, I think, the one on the bottom; correct?

16 A Correct.

17 MR. BLUM: Now, if you can go back, please, to
18 Exhibit 169. If we can blow up, Rick, the one on the upper
19 left.

02:01PM 20 Q Do you see those three green dots on the -- where
21 OU-4 is on the very western part?

22 A Yes.

23 Q Can you just draw a circle around them?

24 A I just did.

02:01PM 25 Q If we can just --

1 THE COURT: Why don't you try it again.

2 THE WITNESS: Thank you.

3 Q BY MR. BLUM: Can you draw a circle around.

4 A Yes.

02:01PM 5 Q Okay. And the bottom one is?

6 A MP1.

7 Q All right. Now, MP1 has been operating for about
8 ten years; correct?

9 A Not quite. 2002, I think.

02:01PM 10 Q And there's about 31 samples taken from it per
11 year; correct?

12 A Not per year, I don't think.

13 Q How many samples are taken per month, then?

14 A I think -- per month?

02:02PM 15 Q Per month. One per month?

16 A No. I don't think MP1 has been monitored monthly
17 at all.

18 Q Well, how many times has there been any -- TCE
19 been found in MP1?

02:02PM 20 A I don't know. One or -- one or two aquifers have
21 detected it.

22 Q Okay. And the first time that it was found was
23 in June of 2019; correct?

24 A You're looking at the data, so perhaps you know
02:02PM 25 better than me. I couldn't possibly have memorized all of the

1 dates for 200 wells.

2 MR. BLUM: Your Honor, may I hand the deposition
3 to the witness?

4 THE COURT: Yes.

02:02PM 5 Do you need to, or can you get at this a
6 different way, Mr. Blum?

7 MR. BLUM: Well, I can read it to her, but I
8 thought the Court wouldn't let me do that.

9 THE COURT: She's not, I don't think, taking
02:02PM 10 issue. She's just not recalling off the top of her head.

11 MR. BLUM: Your Honor, I'm just trying to get
12 her -- I just want to refresh her recollection.

13 THE COURT: All right. That's fine.

14 Q BY MR. BLUM: Ma'am, it's 109, lines 1 through
02:03PM 15 11. Just read it to yourself.

16 A (Witness reviewing the transcript.)

17 MR. BLUM: Your Honor, I think we have a witness
18 in the courtroom.

19 THE COURT: Again, I'm going to ask counsel to be
02:03PM 20 mindful of their witnesses and make sure they're not in the
21 courtroom.

22 While we're at a pause, may I just ask all
23 counsel to let their witnesses know not to come into the
24 courtroom until they are summoned, please.

02:04PM 25 MR. RICHARD: Yes, Your Honor.

1 Q BY MR. BLUM: Does that refresh your
2 recollection, ma'am?

3 A It refreshes my recollection of the deposition,
4 yes.

02:04PM 5 Q And it tested non-detect for VOCs until June of
6 2019. Correct?

7 A That's what it says here, yes.

8 Q That's what you testified to; correct?

9 A That was the question. Yes. I thought it was
02:04PM 10 correct, so I must have been checking.

11 Q All right. Now, what does "non-detect" mean?

12 A It means that the laboratory is unable to detect
13 that contaminant at the level that the analytical method that
14 the lab uses is capable of doing.

02:04PM 15 Q And 2019 was after the remediation system was
16 installed by Whittaker on their site; correct?

17 A I believe that most of that went in in 2017.

18 Q All right. Could the reason why we only had
19 detections at that location after -- not until 2019 be because
02:05PM 20 the remediation system is pulling water in different
21 directions?

22 A I haven't analyzed that. I can't imagine that
23 those small pumping wells are able to pull downgradient that
24 far. But I haven't analyzed it, so I can't say for sure.

02:05PM 25 Q Now, if we look at the middle well, the one above

1 MP1, have VOCs been found in that well?

2 A If I could just --

3 Q Well, let me rephrase the question.

02:06PM 4 A I am -- I believe that it has, and I believe it's
5 probably in only a couple of samples. But I can't -- I just
6 can't recall for sure when and how much.

7 Q And the same would be for the RM well above it;
8 correct?

9 A Yes.

02:06PM 10 Q If -- if we can go back to Exhibit 186, please.
11 If Saugus 2 has been pulling contaminants from
12 the Hula Bowl that contain VOCs and the burn area which contain
13 VOCs and they also both contain perchlorate, wouldn't you
14 expect that those border wells would have both perchlorate and
02:06PM 15 VOCs at the same time since they use the same pathway and they
16 migrate on the same locations?

17 A No. And it's because these pathways that are
18 shown here on the capture zones are just not capable of
19 capturing all of the detail that we know on the site. We know
02:07PM 20 that, for example, the pathway for these wells here actually
21 goes to the northwest.

22 And I think -- you know, I think -- I have often
23 thought about this as well. I think part of the problem is
24 that the groundwater model that Whittaker developed doesn't
02:07PM 25 have the San Gabriel fault zone, which we know to be a barrier

1 to groundwater flow in it. So it's allowing these streamlines
2 of Saugus 1 to go in odd directions that don't really occur in
3 the subsurface that we know.

02:08PM 4 So I think that you're trying to use this capture
5 zone for the wrong purpose.

6 Q All right. When you decided to include this
7 capture zone in your report, did you take into account that
8 it's really not that accurate?

9 A Yes. Of course. And it's not used in that way.
02:08PM 10 My pathways that I have analyzed for this project
11 come directly from the field data. They do not include the
12 model capture zones because there were so many different
13 capture zones that represented so many different things. I
14 thought this one was as close as we could get with respect to
02:08PM 15 the overall pathway representations. But you shouldn't use a
16 model to replicate what you can do from real data measured in
17 the field.

18 Q So field data trumps models?

19 A So a model is a -- as we all know, a numerical
02:09PM 20 representation of the physical system and it can't represent
21 every detail. You have to think about what the model is being
22 used for. So there has to be an objective.

23 For this particular project, the objective of the
24 pathways analysis was to determine, with respect to groundwater
02:09PM 25 flow directions, where the contaminants were going beneath the

1 Whittaker site.

2 Q Let's go to Exhibit 184, which I think you
3 described as the pathways that you relied upon; correct?

4 A Correct.

02:09PM 5 Q Isn't there an arrow that's drawn right through
6 the western boundary?

7 A Yes. And --

8 Q And that's one that you drew; correct?

9 A Yes. That's correct. I did draw that.

02:09PM 10 Q Now, so -- so, indeed, water does flow right
11 through the western boundary past those three wells; correct?

12 A Some water does but not water with VOC -- a large
13 source area of VOC contamination.

14 Q Well, those lines, does it show the lateral
02:10PM 15 extent? Do you know what I mean by "lateral extent"?

16 A Yes. Of course I know what lateral extent --

17 Q What does it mean?

18 A "Lateral extent" means how far something might
19 extend in a lateral condition. You can -- I don't know if
02:10PM 20 you're talking about it with respect to the well of the
21 aquifers, but that is what lateral extent means.

22 Q For instance, there is a line that goes right
23 underneath where MP1 is; correct?

24 A I'm sorry. What kind of line?

02:10PM 25 Q Well, do you see the red line, that dotted line?

1 A Yes.

2 Q You see right above that there is a blue line;
3 correct?

4 A Yes.

02:10PM 5 Q That blue line, again, is a pathway; correct?

6 A Yes.

7 Q And that pathway -- would anything within that
8 pathway capture VOCs?

02:11PM 9 A I don't know what you mean by "capture." So the
10 pathways don't capture anything.

11 Q Would the VOCs be within the area that that --
12 the pathway occupies?

02:11PM 13 A Yes. And that pathway goes around MP1. MP1 is
14 just a little 5-inch well in the subsurface. And they -- the
15 green dot is just bigger than what it is, which is why those
16 two touch. But the pathway goes around it.

17 Q What is the lateral extent of that pathway in
18 terms of -- let's see if we look at it. North is up; correct?

19 A Correct.

02:11PM 20 Q South is down; correct?

21 A Correct.

22 Q How far north is the lateral extension of that
23 pathway?

24 A You don't know.

02:11PM 25 Q So it could take in MP1; correct?

1 A No. Because we know MP1 is not on the pathway
2 because MP1 doesn't have VOCs in it.

3 You know, this is -- this is also what you have
4 to consider. You have to look at the water quality data to be
02:12PM 5 able to determine VOC migrations of pathways.

6 Q Isn't there -- can't one of the reasons be it
7 doesn't have VOCs in it because the VOCs aren't migrating
8 offsite?

9 A No. That's not the reason. We know VOCs are
02:12PM 10 migrating offsite.

11 Q We know that because there's VOCs in the wells;
12 correct?

13 A Correct.

14 Q That assumes, doesn't it, that Whittaker is the
02:12PM 15 only possible source, doesn't it?

16 A I'm sorry. The only possible source of what?

17 Q If there is another source of VOCs outside the
18 site, such as the same site source that is causing the
19 contamination at the Mall wells, the same source that's causing
02:12PM 20 the contamination of the DCE, then you cannot assume that the
21 mere presence of VOCs in Saugus 1 and Saugus 2 shows that
22 Whittaker is a source, can you?

23 A Well, there's certainly a lot of corroborating
24 evidence that supports that, which is why I think it's true.

02:13PM 25 And you have to think about more than just one thing. So the

1 other thing --

2 Q That's not my question, ma'am. Please answer my
3 question.

4 A Okay. Could you ask it again? I'm sorry.

02:13PM 5 Q Your assumption was that the reason that MP --
6 that the pathway that you described right below MP1 doesn't
7 extend to include MP1 is because there's no VOCs in it, but yet
8 we find VOCs in Saugus 2; correct?

9 A I'm sorry. That felt very compound. I'm trying
02:13PM 10 to --

11 THE COURT: Rephrase the question. And try to
12 simplify it if you can.

13 Q BY MR. BLUM: Ma'am, the reason you believe that
14 there -- that the pathway that's right below MP1 doesn't
02:14PM 15 laterally extend to MP1 is because there was no VOCs found in
16 MP1; correct?

17 A Well, there were VOCs found in MP1. They just
18 weren't very high.

19 Q And the reason that's important is because you
02:14PM 20 assume that the only possible source of VOCs in Saugus 2 is
21 Whittaker; correct?

22 A No.

23 Q If the source -- if we do not assume that
24 Whittaker is the source of VOCs in Saugus 2, can you state that
02:14PM 25 the lateral extent of that pathway that we have been talking

1 about doesn't include MP1?

2 A So we don't have any idea what the center lines
3 of the plumes are. And so I'm just drawing the pathway as a
4 streamline, as a centerline, perhaps. And so the -- the fact
02:15PM 5 that the pathway goes that way has nothing to do with
6 Whittaker. It has to do with the information in the well. You
7 have to use the information in the wells to draw the pathways.
8 That's how they're drawn.

9 Q Well, does the pathway for that -- the blue line
02:15PM 10 right above the red line, is that also a pathway for VOCs?

11 A So the one that goes -- so you might recall from
12 the cross-sections that PZ09 doesn't extend down through the
13 S-3 aquifer. So it's a relatively shallow well. And as a
14 result of that, it occurred to me, since we did have TCE
02:15PM 15 detected in both wells on either side, that we could be seeing
16 some VOCs go beneath it.

17 Q That's not my question, ma'am. Focus -- I'm
18 talking about MP1, and we're not talking about the PZ well.

19 A Okay. I'm sorry.

02:16PM 20 Q Does the pathway that you drew, the blue pathway,
21 that's right above the red dotted line --

22 A Yes.

23 Q -- is that a pathway for VOCs?

24 A Yes.

02:16PM 25 Q And does the lateral extent of that pathway

1 include the MP well?

2 A You don't know that. And the reason that you
3 don't know that is because you don't know exactly when it went
4 by MP1. But I drew it around MP1 because MP1's concentrations
02:16PM 5 of VOCs aren't very high.

6 Q So it could be that it hasn't been a pathway for
7 VOCs for almost a decade.

8 A Yes. It could be that. I'm sorry. It could be
9 that MP1 hasn't seen that for decades.

02:17PM 10 Q So for at least a decade, at least in that
11 pathway, that VOCs haven't moved along that blue line.

12 A You don't know that because it doesn't go through
13 MP --

14 Q If we don't know, is it --

02:17PM 15 THE COURT: Mr. Blum, let's move on, please.

16 MR. BLUM: All right. Let's move on.

17 Q Last question, ma'am. When you don't know
18 something, does it go both ways? In other words, we don't know
19 that it has, but we don't know that it hasn't?

02:17PM 20 THE COURT: Ask another question, please.

21 MR. BLUM: All right. Let's move off of this and
22 let's move on to -- this is the last, I think -- next to the
23 last area I have.

24 Q Let's move to V-205. Again, if we can put up
02:18PM 25 Figure 158.

1 Now, can you show where 205 is?

2 A Yes.

3 Q Now, when the -- is it correct that in your
4 deposition you testified that the two bases for your conclusion
02:18PM 5 that Whittaker is the source of 205 is one flow direction and
6 the other covariance?

7 A Yes.

8 Q Now, when you say "covariance," is there a
9 mathematical variation one uses to determine whether or not
02:18PM 10 something has sufficient covariance?

11 A If groundwater data and groundwater
12 concentrations -- hang with me -- if they were parametric in
13 their distribution, then you could apply a statistical
14 analysis.

02:19PM 15 Q Have you done that?

16 A No, because they are non-parametric. So let's
17 talk about parametric and non- --

18 Q That's okay.

19 A You don't want to.

02:19PM 20 Q There is no statistical analysis that you applied
21 to determine whether or not the VOCs sufficiently covaried with
22 the perchlorate to draw a conclusion that they're from the same
23 source; correct?

24 A Because they're non-parametrically dispersed. It
02:19PM 25 wouldn't be appropriate.

1 Q Now, in making a determination that -- your
2 determination, did you use any parameters, such as the
3 covariance has to be 80 percent? 90 percent? 5 percent? How
4 did you determine it was enough covariance?

02:19PM

5 A That's a good question. And there is a lot more
6 covariance for the onsite wells on the Whittaker site than
7 there are in the water supply wells, and here's why.
8 Because --

02:20PM

9 Q Ma'am, that wasn't my question.
10 My question was: For the wells offsite,
11 specifically for 205, did you use a percentage of covariance
12 necessary in order for you to reach a conclusion that the
13 covariance was sufficient?

02:20PM

14 A No, because it wouldn't have been appropriate to
15 do so, given that these are pumping wells.

16 Q Okay. So you're not testifying that as to
17 Well 205, that there is sufficient covariance for you to draw
18 any conclusion, are you?

02:20PM

19 A From a covariance perspective, no. But it makes
20 sense that the pathways from the Whittaker site have impacted
21 205.

22 Q And it makes sense because we find VOCs in 205.

23 A No. That -- there's so much evidence that --

24 Q Okay.

02:21PM

25 A So the --

1 THE COURT: Let him ask another question, please.

2 Q BY MR. BLUM: Isn't that correct that -- when I
3 asked you at your deposition what was the basis of your
4 conclusion that Whittaker was the source of the contamination
02:21PM 5 at 205, you raised only two reasons: One is covariance and,
6 two, the pathway; correct?

7 A That may -- you remember it better than me, so
8 that may be correct. But that doesn't mean that the wells
9 aren't pumping, and that makes a difference.

02:21PM 10 Q If we can go to page 163, line 20, line *[sic]*
11 164, line 2, please.

12 A Okay. Hang on. 163.

13 MR. BLUM: 163, line 20, through 164, line 2.

14 THE WITNESS: Yes. Those are the two that I
02:22PM 15 mentioned, but I will just point out that I only answered in
16 one sentence. There's a lot more that goes into it than that.

17 MR. BLUM: Byron, is it okay?

18 MR. GEE: Improper impeachment.

19 THE COURT: Sustained. She's answered the
02:22PM 20 question.

21 Q BY MR. BLUM: So in your deposition, those are
22 the only two you mentioned; correct?

23 A Yes. But you didn't ask me if there were others,
24 and you didn't give me much of an opportunity to explain that
02:22PM 25 then either.

1 Q If we take a look at the pathway in isolation,
2 the mere fact that there is a pathway isn't enough, is there?

3 A Isn't enough for what?

4 Q To conclude that Whittaker is a source; correct?

02:23PM

5 A No. But if there isn't a pathway, you probably
6 would need to rethink the process. It isn't just the flow
7 direction pathway that goes into it.

02:23PM

8 Q All right. Ma'am, did you look for any evidence
9 that there were other sources of VOCs that could have impacted
10 V-205 other than Whittaker?

02:23PM

11 A I didn't do a detailed investigation, but I did
12 look at the other sources that have been described in the area.
13 I think, for example, in the CH2M Hill 2015 VOC analysis, there
14 was a series of sources that had been analyzed by others and
15 determined not likely to be the source. So I looked at that
16 information.

02:24PM

17 I also looked at the additional information from
18 other facilities that had been provided by others and
19 determined that they didn't look like they had completed
20 pathways.

02:24PM

21 The perchlorate that is detected in the water
22 supply wells tell us that groundwater from the Whittaker site
23 is in the well. So you know that already. So the TCE follows
24 with that.

25 Q Is 205 downgradient from 201?

1 A It's a little bit cross-gradient. It is
2 downgradient. It isn't screened exactly the same as 201. So
3 it is a little bit -- you know, there's some uncertainty
4 associated with that process. But the problem -- it's not a
02:24PM 5 problem. But the reason that they --

6 Q Is it downgradient? That's all I asked.

7 A It makes a difference whether the wells are
8 pumping as to whether or not it's downgradient.

9 Q If they're both not pumping, are they
02:24PM 10 downgradient?

11 A It is more side gradient, if nothing is pumping.

12 Q What is farther from the Whittaker site? 205 or
13 201?

14 A 205.

02:25PM 15 Q VOCs, were they first detected in 205 or 201?

16 A That's a -- I think the first detection of VOCs
17 in 205 -- I think that happened first. I think it was a few
18 years' difference.

19 Q So there was a few years between the time that
02:25PM 20 the well that is farthest away and is downgradient was
21 contaminated than the well that was closer to the site and
22 upgradient; correct?

23 A So again --

24 Q Is that correct?

02:25PM 25 THE COURT: You're going to have to rephrase your

1 question because it actually misstated something she said.

2 Q BY MR. BLUM: Okay. Isn't that correct that the
3 well closest to the Whittaker site was contaminated after the
4 well that was farthest away?

02:25PM 5 A Yes. And I can explain that.

6 Q All right. Thank you.

7 THE COURT: Mr. Gee?

8 **REDIRECT EXAMINATION**

9 BY MR. GEE:

02:26PM 10 Q Ms. Stanin, can you explain your last answer?

11 A Thank you. Yes, I can.

12 So because V-201 and V-205 are pumping, that
13 really changes the flow dynamics of what's happening in the
14 groundwater system at that time.

02:26PM 15 So two things were happening with V-205. One,
16 contaminants are actually continuing to leave the site and head
17 downgradient along that V-205 pathway. That's still occurring
18 at the same time that these pumping wells over here are
19 actually pulling and containing, meaning not letting it go
02:27PM 20 downgradient, of that area.

21 When those wells were off, recall that he talked
22 about how the wells were on, they become -- Saugus 1 and
23 Saugus 2 were on. They became contaminated. They turned those
24 wells off. When that occurred -- that occurred over 12 years.

02:27PM 25 When that occurred, the flow dynamic of the entire system

1 changed. And V-201 -- because the water agency still needed
2 water, V-201 and V-205 were pumping.

3 So V-201 began to pull the contaminants that
4 Saugus 1 and Saugus 2 already had in place. V-205 is sitting
02:27PM 5 over here, letting the pathway from the Whittaker site continue
6 to migrate.

7 So the timing of this well and this well getting
8 contamination in them is not this simple upgradient,
9 downgradient. You know, it should have happened first or it
02:28PM 10 shouldn't have happened second. It's just because the wells
11 were pumping at various times and at various rates.

12 It's readily explained. It's just not as simple
13 as is the well upgradient or downgradient.

14 Q Thank you.

02:28PM 15 Can we display Exhibit 184?

16 Ms. Stanin, I'd like you to take a look at
17 Exhibit 173.

18 When you use the term "covariant" and "pathways,"
19 was the covariant -- the covariant that you were talking about
02:29PM 20 onsite or offsite of the Whittaker Bermite site?

21 A I think we talked about both, but this is showing
22 covariance onsite.

23 Q And the reason that you showed covariant, was
24 that to -- I believe your testimony was that it was to show
02:30PM 25 that the contaminants flow together; is that correct?

1 A Yes. To be a little more exacting, I already
2 knew that the water supply wells had perchlorate in them.
3 That's groundwater from the Whittaker site. So if TCE is
4 migrating with the perchlorate, then it could, too, arrive at
02:30PM 5 the water supply wells.

6 Q Okay. And does it show that perchlorate and VOCs
7 migrate along the same pathways?

8 A Yes. For these wells, that's what these charts
9 indicate to me.

02:30PM 10 Q And so if the VOCs and perchlorate flow along the
11 same pathways and they're covariant on the site, would that --
12 what conclusion would that lead you to -- for detections and,
13 for example, V-205?

14 A They're continuing to move offsite along the same
02:31PM 15 pathways that perchlorate used probably to arrive at 205.

16 Q Okay. Mr. Blum discussed some onsite extraction
17 wells as small pumping wells. Can you explain that to me?

18 A Yes. As part of the site cleanup, Whittaker is
19 required to install and operate extraction wells. And those
02:31PM 20 extraction wells aren't these big 2,500-gallon-a-minute,
21 24-inch water supply wells. They're small wells, and they're
22 meant to do nothing more than to remove as much contaminant as
23 possible to keep it from continuing to migrate off of the site.
24 So they're trying to contain or capture, hold the contamination
02:31PM 25 onsite.

1 Q Okay. And so if we're to look at the -- I don't
2 remember the term that -- the --

3 A Cone of depression around the pumping wells?

4 Q Yes, cone of depression around the pumping wells.

02:32PM 5 How would you compare the cone of depression around those small
6 extraction wells to the water protection wells?

7 A They're much smaller. The area would be
8 commensurate with the amount that they are pumping. And most
9 of those wells are pumping 20, 30 gallons per minute rather
02:32PM 10 than 2,500 gallons a minute, which is what the supply wells are
11 pumping.

12 Q Okay. And, Ms. Stanin, when you were doing your
13 analysis -- we talked about plausible pathways, and your
14 analysis was -- was your analysis to suggest that it's more
02:33PM 15 likely than not that contaminants found in the production wells
16 originate from the Whittaker site?

17 A Yes. That's what "plausible" means.

18 Q And that doesn't mean that -- your analysis
19 doesn't extend beyond it's more likely than not, does it?

02:33PM 20 A Correct.

21 Q Ms. Stanin, there was a question regarding DCA
22 use at the Whittaker Bermite site. You mentioned that in your
23 background section of your report. Do you recall that
24 testimony?

02:33PM 25 A Yes.

1 Q What was the source of that information?

2 A I believe that the information that I put in my
3 expert report came from the Acton-Mickelson 1997 remedial
4 investigation at the Whittaker site.

02:34PM

5 Q And was that -- was that piece of history
6 relevant or significant to your expert analysis?

7 A Well, no. It was just background information. I
8 included as much information as I could based on the historical
9 documents, but I didn't check it firsthand. I had no way to do
10 that.

02:34PM

11 Q And what -- from the Barbara Mickelson report,
12 where did she get that information from? Do you recall?

13 A I actually do recall this because I actually said
14 in my report according to Bermite employees. I just read that.
15 So she got that information from Whittaker.

02:34PM

16 Q Are you aware of any more reliable source than
17 that report?

18 MR. BLUM: Objection, Your Honor. Beyond the
19 scope of the report or her testimony.

02:34PM

20 THE COURT: It's overruled. Strike that. I'm
21 sustaining it but not on that ground. It's a bit vague.

22 Q BY MR. GEE: Okay. With regard to DCA used at
23 the Whittaker site, did you have any other information as to
24 when DCA was first used at the Whittaker site, other than the
25 Acton-Mickelson report?

02:35PM

1 MR. BLUM: Beyond the scope of the report.

2 THE COURT: Overruled. You opened the door on
3 this.

02:35PM 4 Q BY MR. GEE: I'm sorry. The question is other
5 than the Acton-Mickelson report, do you have any other source
6 that tells you when Whittaker started to use DCA at the site?

7 A No. I don't have any other source. It's my
8 understanding it was TCA rather than DCA.

02:35PM 9 Q I'm sorry. TCA.
10 So in your report, is it correct to say that you
11 used the best information that you had?

12 A I felt like that was the case.

13 Q And you weren't intentionally misleading anybody?

14 A No.

02:35PM 15 Q Ms. Stanin, Mr. Blum brought up a lot of
16 different questions about -- and solicited quite a bit of
17 testimony. Did any of the materials that Mr. Blum showed to
18 you change any of your conclusions as you described them to the
19 jury today?

02:36PM 20 A No.

21 MR. GEE: I think that's all I have.

22 THE COURT: Anything further, Mr. Blum?

23 MR. BLUM: No, sir.

02:36PM 24 THE COURT: All right. You're excused. Please
25 watch your step going down. Thank you.

1 Ladies and gentlemen, we have now concluded for
2 the day. We will pick this up tomorrow at 8:30.

3 Please remember, do not speak to anyone about the
4 case, the people, or the subject matter involved. Continue to
02:36PM 5 keep an open mind.

6 Have a good evening, everyone. We will see you
7 at 8:30 tomorrow. Thank you.

8 (The following proceedings were held in
9 open court outside the presence of the jury:)

02:37PM 10 THE COURT: Please be seated. It is now 2:37.
11 We're going to take a break in a moment to start the afternoon
12 session.

13 You have your witness available?

14 MR. RICHARD: Yes, Your Honor. Mr. Zelikson is
02:37PM 15 willing, ready, able. Mr. Cruz just asked that we remind him
16 again about setting up the Zoom call. So I think we're good to
17 go.

18 THE COURT: All right. It's 2:37. So we are
19 going to break for 15 minutes. So we will return at 2:52.

02:38PM 20 Thank you.

21 MR. RICHARD: Thank you, Your Honor.

22 (A recess was taken at 2:37 p.m.)

23 THE COURT: We are back on the record in the
24 trial matter outside the presence of the jury. This is an
02:54PM 25 afternoon session dealing with bench only issues.

1 You may call your next witness.

2 MR. RICHARD: Thank you, Your Honor. Plaintiff
3 would call Mr. Jeffrey Zelikson.

02:54PM

4 THE COURT: Go ahead and have him sworn in,
5 please.

6 THE CLERK: Yes. Mr. Zelikson, would you please
7 raise your right hand to be sworn.

02:54PM

8 Do you solemnly swear that the testimony you
9 shall give in the cause now before this Court shall be the
10 truth, the whole truth, and nothing but the truth, so help you
11 God?

12 THE WITNESS: Yes, I do.

13 THE CLERK: Thank you, sir. Sir, for the record,
14 would you please state your name and then spell your last name.

02:55PM

15 THE WITNESS: Yes. The name is Jeffrey Zelikson,
16 Z-e-l-i-k-s-o-n.

17 THE COURT: Mr. Richard.

18 MR. RICHARD: Thank you, Your Honor.

19 **JEFFREY ZELIKSON,**

02:55PM

20 **CALLED BY THE PLAINTIFF, WAS SWORN.**

21 **DIRECT EXAMINATION**

22 BY MR. RICHARD:

23 Q Mr. Zelikson, can you hear me okay?

24 A Yes, I can.

02:55PM

25 Q Okay. And there is no one in the room with you

1 today?

2 A No.

3 Q Okay. Can you tell us where you work?

4 A I work at a company called Norris Advisors.

02:55PM 5 Q What is your position there?

6 A I'm a principal --

7 Q Okay.

8 A -- with Norris Advisors.

9 Q Can you describe for us your education and

02:55PM 10 employment history briefly for the Court?

11 A Yes. So I have a -- an engineering degree from
12 the City University of New York which I obtained in 1967. I
13 have graduate level --

14 MR. BLUM: Your Honor, since this is before the
02:56PM 15 Court, I would stip he is an expert and allow a c.v. to be
16 entered.

17 THE COURT: Very well.

18 MR. RICHARD: Okay. For continuity, I'm still
19 going to draw it out a little bit, Your Honor, but thank you.
02:56PM 20 I appreciate that.

21 THE COURT: You can. You're on the clock, so
22 just take your time.

23 MR. RICHARD: You do have a sense of humor,
24 Your Honor.

02:56PM 25 Q Did you work for the EPA at some point, sir?

1 A Yes, I did.

2 Q When was that?

3 A I joined EPA during its first year of existence
4 in 1971.

02:56PM 5 Q Okay.

6 A I was there for 25 years and left in 1995.

7 Q Okay. And just, in general, what did you do
8 after you left?

9 A I went into private sector consulting. My work
02:56PM 10 since '95 has been primarily in doing expert analysis and
11 testimony in matters related to hazardous waste sites which is
12 where I focused a lot of my attention when I was at the agency.

13 Q Okay. Very briefly, can you pull up -- I think
14 you prepared a PowerPoint; is that right, sir?

02:57PM 15 A Yes.

16 Q Let's see if we can go to slide 1. I don't want
17 to spend a lot of time on this since your c.v. will be coming
18 in.

19 THE COURT: How are we making this part of the
02:57PM 20 record?

21 MR. RICHARD: My thought, Your Honor, would be we
22 can send this to Your Honor when we're done just as we did with
23 opening.

24 THE COURT: Well, we still need to at least mark
02:57PM 25 it for the record. So how are you marking this PowerPoint?

1 MR. RICHARD: We will mark it as next in order.

2 MR. BLUM: Your Honor, we have never seen this.

3 THE COURT: Mr. Richard?

02:57PM 4 MR. RICHARD: Yes. All of the demonstratives in
5 this have been provided to counsel.

6 THE COURT: So every single slide in this
7 PowerPoint has been provided?

8 MR. RICHARD: No. I think the words have not but
9 all the pictures and charts have, Your Honor.

02:57PM 10 THE COURT: All right. So do you have an
11 objection, Mr. Blum, to him playing the PowerPoint?

12 MR. BLUM: I guess not, Your Honor.

13 THE COURT: All right.

02:58PM 14 Q BY MS. RICHARD: Just briefly, can you tell us --
15 and let's break it up into what you did with the USEPA and your
16 experience with sites in the United States involving time
17 critical removal actions.

02:58PM 18 A Okay. So when I was at the EPA, I worked in two
19 regions, region 2 which is New York and region 9 which is in
20 California. I spent 25 years there. My primary focus
21 particularly as it's relevant to a matter that we are dealing
22 with today was in managing, directing the division of hazardous
23 waste which put me in a position to run and have the
24 responsibility to make decisions at our most important sites.
02:58PM 25 The agency calls them national priority sites. We had 125 of

1 those. So I was responsible for making clean-up decisions and
2 interacting with communities regarding those sites during that
3 time.

4 In addition, my responsibilities including --
02:59PM 5 included the direction of our emergency response program which
6 is where we performed time critical removal actions over the
7 time that I was there. Over that time we did about 20 to 30 of
8 those a year. I was involved in making decisions in both about
9 how to clean those sites up and how to interact with the
02:59PM 10 community at about 200 sites.

11 Keeping this concise, when I left EPA in 1995, my
12 consulting practice understandably focused on sites, hazardous
13 waste sites, because that's where I spent the first 25 years
14 under the EPA. And my practice is focused primarily on
03:00PM 15 evaluations and expert opinions regarding the necessity and
16 consistency of response actions under the NCP. And I have been
17 retained on about 100 different sites to provide those
18 opinions.

19 Q And just two quick -- I don't want to interrupt.
03:00PM 20 Two quick definitions. You refer to the NCP. Can you tell us
21 what that is briefly?

22 A Yes. The NCP, I can actually -- this next slide
23 if you want to go into that. It means the national contingency
24 plan. That's a shortened version of what it actually means.

03:00PM 25 It's -- it's the regulations that implement the Superfund

1 program. Again, there's a longer term for the Superfund
2 program. In 1980 the United States Congress passed the
3 Superfund statute which is called CERCLA which is -- I don't
4 want to get into all these acronyms, but it was the nation's
5 effort to deal with the past poor disposal practices that we
6 had in the country for hazardous waste.

03:01PM

7 Q Okay.

8 A The NCP is the regulations that implement that
9 statute.

03:01PM

10 Q And did you become familiar with those
11 regulations while you were with the EPA?

12 A Absolutely. They were what governed my actions
13 and the division of people that I was directing. That was our,
14 you will, our bible for how to conduct clean-ups at Superfund
15 sites whether they were long-term actions or short-term
16 actions.

03:01PM

17 Q And did you actually have any input or contribute
18 to those regulations?

19 A Yes. So I joined the agency before that
20 Superfund law was passed, and the first set of regulations to
21 implement the Superfund law came out in 1982. And there were
22 subsequent revisions to that. The one that we're working with
23 today was passed in 1990. What happens when regulations are
24 developed nationally, the people in EPA headquarters in
25 Washington, D.C. seek the input from the regional directors as

03:02PM

1 they're developing those programs to get sort of ground truth
2 experience in how those regulations are developed.

3 As the regional director, both in Region 2 and
4 Region 9, I participated in quarterly meetings at least where
03:02PM 5 aspects of the regulations were discussed. We provided our
6 input. So yes, I contributed to the development of those
7 regulations.

8 Q Okay. Very good. Before we move into the
9 details of the NCP, can you tell us what your assignment was in
03:02PM 10 this matter, Mr. Zelikson?

11 A Yes. So my assignment in this matter was to
12 evaluate the costs that the Santa Clara Valley Water Agency was
13 claiming and whether or not those costs were incurred -- were,
14 first, necessary and were they incurred consistent with the
03:03PM 15 NCP.

16 Q Have you provided any other services to
17 SCV Water?

18 A Yes. Over the years I have. There was an
19 earlier litigation which was -- ended in a settlement, and I
03:03PM 20 provided an expert report in that case. I think that was in
21 2006. Earlier on before being retained as an expert to provide
22 this testimony that I am providing today, I was retained as a
23 consulting expert to the water agency to assist them in how
24 they conducted themselves with the actions they were taking to
03:03PM 25 try to assist them and make sure that they were taking them

1 consistent with the national contingency plan so they would be
2 in a good position to recover their costs down the road.

3 Q I didn't catch the very last part of what you
4 said. So they would be in a position to what?

03:04PM

5 A To make an effective cost recovery case which is
6 what we are talking about right now. So yes. That's what I
7 assisted them in doing.

8 Q Okay. So you told us when the NCP regulations
9 were first put --

03:04PM

10 THE COURT: Before you do that, tell me more
11 specifically what consulting you provided to the water agency
12 with respect to issues of cost recovery. So my question,
13 Mr. Zelikson, is focused on what specific areas of cost
14 recovery did you consult with him on.

03:04PM

15 THE WITNESS: Okay. So it would be anything that
16 would relate to their ability to put an effective claim
17 together. So the first part, although this didn't work out so
18 very well, I talked to them about how they should keep their
19 cost records, if they were going to make a claim for their

03:05PM

20 internal costs, for example. I also talked to them about
21 making sure they kept good records on invoices that they were
22 getting from outside consultants who were helping them.

23 I also helped them more recently in making sure
24 that, when they were looking at a long-term solution to -- we
03:05PM 25 will get into this more later -- to the solution to the VOCs

1 that they were experiencing in their water supply that was
2 serving as a block to getting a --

03:05PM

3 THE COURT: You have to stop, sir, because the
4 court reporter missed what you said. So you said that was
5 serving as a block to getting a what?

6 THE WITNESS: A permit for their perchlorate
7 treatment plan.

03:06PM

8 So I was helping them with what they would call
9 an engineering evaluation cost analysis which is something that
10 has to be done to select a remedy according to the way the NCP
11 is laid out. So I was advising them as to how to do that, and
12 they eventually hired a separate consultant to help implement
13 that particular part of this problem that they were dealing
14 with. We will talk about that a little bit more later in my
15 testimony.

03:06PM

16 So I helped them making sure that they had, if
17 you will, in lay terms, their ducks lined up so they would be
18 in a position to make an effective cost recovery claim.

19 THE COURT: Mr. Richard.

03:06PM

20 MR. RICHARD: Thank you.

21 Q And you just referred to this engineering
22 evaluation. Is that also referred to as an EE-CA?

23 A Yes.

03:06PM

24 Q So when we see capital EE-CA, what does that
25 stand for?

1 A Engineering evaluation cost analysis.

2 Q Okay. Just to put a time frame, following up on
3 the judge's questions to you, was this in the past few years
4 that you were dealing with the EE-CA related issues?

03:07PM

5 A Yes.

6 Q Okay.

7 A I think I started that in 2018.

8 Q Very good. Thank you.

03:07PM

9 And can you tell us the -- in general the -- can
10 you explain the framework and purpose of the NCP, in your
11 experience?

12 A Yes. I have a slide for that.

03:07PM

13 So the regulations that implement the Superfund
14 law provide an organizational structure for parties that are
15 implementing the Superfund and trying to clean up sites. It
16 provides a series of stepwise actions that need to be taken.

03:08PM

17 The NCP was originally constructed to govern the
18 actions that EPA was taking. But in 1990, it was amended to
19 specifically have a set of provisions that would allow for
20 private parties to take actions. And it set out a separate set
21 of provisions for private parties.

03:08PM

22 So it basically is a stepwise approach to
23 identifying and cleaning up hazardous waste sites. And it
24 provides consistency across the country for both how the agency
25 needs to do it and also how private parties should be

1 conducting themselves to comply with these requirements.

2 Q So in the context of responding to the releases
3 of hazardous substances, how is the NCP important in that
4 context?

03:09PM

5 A Well, it sets out the rules for how you -- a
6 number of things. Right? How you investigate and clean up a
7 site. So it sets out how you do an investigation, how you do a
8 feasibility study, looking at alternatives. Once you have a
9 site characterized, then you are in a position to figure out
10 what kind of remedies you might employ. It calls out for
11 looking at various alternatives. These are for the longer term
12 cleanups. Then there's a process for selecting a remedy and
13 involving the public in that.

03:09PM

14 It also includes provisions for what you do when
15 you find problems along the way, either at an MPL site or any
16 other site that require a more immediate response. And broadly
17 speaking, it is divided into what they call remedial
18 requirements, which are what I just talked about, the remedial
19 investigation feasibility study process, and then there's a
20 shorter term type of action that you take, which are called
21 removal actions, which are either short-term action --
22 immediate removal actions or ones that we would call non-time
23 critical removal actions. We can talk more about that later.

03:10PM

24 Q Before we go into the details of the difference
25 between remedial and removal, you pointed out that initially

03:10PM

1 this applied to the EPA and then, when they couldn't handle all
2 the Superfund sites, it was expanded to include cleanups by
3 private parties. Did I get that right?

03:10PM 4 A Yeah. Essentially, that is right. I mean, I
5 think private parties conceivably could have taken the
6 initiative to clean up sites on their own.

7 But what became clear, as the 1990 version of
8 these regulations was being developed, is that EPA was not in a
9 position to provide oversight of all of the sites in the
03:11PM 10 country. The estimates were 30,000 hazardous waste sites in
11 the country. EPA had carved out maybe 1,500 across the whole
12 country that they could focus on.

13 So they were looking for a set of provisions that
14 would encourage private parties to go out and do cleanups and
03:11PM 15 then allows them, where appropriate, to recover the costs that
16 they had incurred from other parties who may have had liability
17 for it. So it was kind of a situation that we have here.

18 Q Right. But I just want to ask you this -- I want
19 this to be -- I want to be clear on this point.

03:11PM 20 Are the rules different for government cleanups
21 as opposed to private party cleanups under the NCP?

22 A Yes, they are. Compliance with the NCP is very
23 different for private parties. And this last bullet point here
24 on this slide, the standard that was established in 1990 was
03:12PM 25 substantial compliance, which we can go into a bit more later.

1 But it basically provides a much more flexible
2 approach with private parties, understanding that private
3 parties won't have -- wouldn't have had all of the detailed
4 knowledge that the EPA would have. And it provided a more
03:12PM 5 flexible approach that the -- with the public policy
6 perspective of encouraging private parties to do this and not
7 be thwarted in the end in their ability to recover costs from
8 other private parties who had liability for the site.

9 Q How do you know that the NCP rules are not to be
03:12PM 10 used as a rigid checklist in private party cost recovery
11 actions?

12 A Because it says so in the NCP itself.

13 Q So my follow-up question is: In your experience,
14 do professionals who routinely work in the area of NCP
03:13PM 15 compliance understand that it's a different framework for
16 cleanups led by a government entity versus private party cost
17 recovery?

18 A Yes.

19 Q There's a pretty major distinction, or is it just
03:13PM 20 a minor detail you happened to stumble on?

21 A No, this is a major distinction.

22 Q Okay.

23 A This slide here, by the way, this is a -- I
24 should explain, if you need me to, the fact that this is an
03:13PM 25 instruction in the preamble to the national contingency plan

1 regulation.

2 So the regulations, when they came out, had a
3 preamble, which sort of summarized the public comments and the
4 decisions the agency finally made in putting out the
03:13PM 5 regulations. And it set out some general instructions as to
6 how to look at these regulations. And that is all in the
7 preamble. It's part and parcel of the regulations themselves.
8 And this is a statement directly from that where this whole
9 point about strict compliance was extremely important.

03:14PM 10 Q And so what is the -- I think you have touched on
11 this but just to be clear. What is, in your experience, the
12 general framework for evaluating the compliance or substantial
13 compliance with the NCP for a private party cost reaction?
14 What is the framework that you use?

03:14PM 15 A Substantial compliance. That's the question;
16 right? It's a more flexible standard that requires -- and
17 ultimately some judgment that a seasoned practitioner could
18 make and provide their valuation to the trier of fact, in this
19 case Judge Blumenfeld. But it gives an opportunity to make
03:14PM 20 some judgment calls about what is and what is not applicable
21 and what is and is not important.

22 It also requires you to look at, you know, the
23 site specific circumstances within which you're trying to make
24 these judgments.

03:15PM 25 I have another slide that we might look at, if

1 that's okay.

2 So again, this is a statement out of the
3 preamble. Very similar statement is in the body of the NCP
4 itself, but let me just talk about this.

03:15PM 5 So this is basically --

6 Q Well, let me ask you a question. And let's try
7 to stick to question and answer just so I can follow along and
8 everyone is happy.

9 A Right.

03:15PM 10 Q You have a -- the slide you prepared says, "PRPs
11 must be in substantial compliance with the NCP." And you
12 talked to us about substantial compliance. What are you
13 referring to when you say a PRP?

14 A Basically a private party.

03:15PM 15 Q And what are the key elements, in your view, of
16 substantial compliance with the NCP, again, for private party
17 cleanup, in your experience?

18 A Well, that you would evaluate the site specific
19 circumstances within which the cleanup is occurring and then
03:16PM 20 make judgment calls about the relative consistency with the
21 applicable requirements. That's what this slide here says for
22 private parties. You -- when you look at the site specific
23 circumstances, which is how you would interpret evaluating as a
24 whole, you look to see that the private party actions were
03:16PM 25 insubstantial and in reasonable compliance with the potentially

1 applicable requirements.

2 All of these phrases are very important.

3 Q Well, let's break it down. Hold on. Let's break
4 it down. Let's start with the last one first, and then you can
03:16PM 5 explain the others.

6 You say with potentially applicable requirements.
7 How does that influence in matters where you're involved in
8 evaluating and counseling clients on NCP compliance -- again,
9 private party compliance?

03:17PM 10 A Well, it's just to say that not every provision
11 of the NCP is applicable to the response actions a party is
12 taking. So one of the jobs of an expert is to take a look at
13 what response actions were taken and make a determination as to
14 which sections of the NCP are and which are not applicable to
03:17PM 15 those response actions.

16 Q And then how does the requirement or the aspect
17 that it be evaluated as a whole, how does that come into play,
18 in your experience?

19 A That comes into play in -- as you're making these
03:17PM 20 judgments about what's applicable and substantial compliance is
21 to look at the site specific circumstances and facts within
22 which the response action is being taken.

23 Q Okay. And in your experience, would a seasoned
24 professional in this area be familiar with the flexibility that
03:18PM 25 you have just outlined as inherent in the substantial

1 compliance aspect or standard for private party cost recovery?

2 A Yes.

3 Q Just briefly, why is that flexibility needed
4 instead of just requiring a private party to meet every
03:18PM 5 requirement to guarantee compliance with the NCP?

6 A It goes back to the public policy concern about
7 wanting to encourage private parties to take action and not to
8 have their cost recovery actions defeated for some reason that
9 wasn't really substantive.

03:18PM 10 Q Okay. And how do you know that was the intent of
11 these regulations or the U.S. EPA?

12 A It's stated in the NCP. It's stated in the
13 preamble. And I experienced this when I was at the agency.
14 This was clearly the intent.

03:19PM 15 Q Okay. Could you please take us and the Court
16 through how you evaluated the recoverability of the costs that
17 you reviewed in this matter, that is, the water agency's cost?

18 A Yes. Sure.

19 So over the years, I have developed a methodology
03:19PM 20 for evaluating claims of this nature. Let me start with this.

21 So that methodology starts with the cost claims
22 because, ultimately, this is about a claim of one party against
23 another for recoverability of costs.

24 So I start with the -- with an evaluation of the
03:20PM 25 costs, and I make a determination which of the costs are,

1 indeed, response costs and which are not. This slide shows the
2 result of that first step in the analysis, which is the water
3 agency gave us a whole lot of costs. The first job that I had
4 was to say which one of these are potentially recoverable as
03:20PM 5 response costs? And I determined from that first screen, if
6 you will, that 7.6 million of those costs were not response
7 costs and, therefore, not able to be claimed.

8 Q Such as what?

9 A These would be like law firm costs, expert costs,
03:20PM 10 other costs that -- for example, I talked to you before about
11 these internal costs. It turns out, despite my encouragement
12 for the agency to keep better records, it was very difficult
13 for them to do that for whatever accounting reasons. So they
14 had a half a million dollars in costs that they were claiming,
03:21PM 15 but they didn't pass the threshold of adequate documentation
16 because I couldn't determine if they were operating costs that
17 they were incurring or whether they were costs focused on the
18 cleanup activities or the legitimate response costs.

19 Q So let me stop you. You start out with the
03:21PM 20 15.9 million. You make this first cut. Then what do you do
21 with the reduced amount? You start with 15.9 million less the
22 7.6 million. Then what is your next step in the process?

23 A Next step in the process is to do a detailed
24 review of the cost documentation. Invoices in this case and
03:21PM 25 further down this column we looked at the costs associated with

1 the replacement a little bit.

2 The first thing to do was to take the remaining
3 costs and put them into categories so that I could determine --
4 once you put them into a category you can figure out which
03:22PM 5 actions of the NCP apply to them and then make a judgment call
6 whether those were -- they followed the rules that were laid
7 out in the NCP and also make a determination whether these
8 costs were necessary.

9 So the remaining costs of the 15.9 is this
03:22PM 10 8.3 million that you see in this chart. And what I was --
11 okay. I will just stop there.

12 Q Good. I need to ask you a foundational question.

13 For the work you did in this case, what standard
14 or definition of response activity did you use? What is a
03:22PM 15 response cost?

16 A A response cost is a cost that was incurred to
17 take an action to address the release of hazardous substances.

18 Q Okay. And then in your chart, you say "necessary
19 and consistent." So what does it mean for an activity,
03:23PM 20 assuming it's a response cost, to be necessary, in your
21 experience, under the NCP?

22 A Okay. The first part of that is it has to be an
23 action that was taken to address the release of hazardous
24 substance -- hazardous substances. Then it has to be a cost
03:23PM 25 that was imposed on the party. There has to be a regulatory

1 nexus for it.

2 So you have to show typically that a regulatory
3 agency required the action and that, also, there's a component
4 of it that is necessary that the action was taken to address an
03:23PM 5 impact on the environment or public health. That is the
6 necessary components to it.

7 All of these costs here on this table meet those
8 requirements for necessity.

9 Q And how did you determine that?

03:24PM 10 A Well, we look at the first group of costs, which
11 I will just highlight here. These costs all have to do with
12 the permitting of the perchlorate treatment facilities
13 basically that we had, either to maintain the permit for
14 Saugus 1 and 2, which is the first item, to get a permit for
03:24PM 15 the V-201 well, which is the second item.

16 And the blending costs are the costs that were a
17 little bit more complicated to explain, but they were imposed
18 on us by the Regional Water Quality Control Board, basically.
19 So that is sort of the regulatory nexus for those. We can talk
03:24PM 20 a little bit more about that later.

21 Then the perchlorate and VOC investigation costs
22 are about maintaining and evaluating the situation with regard
23 to perchlorate. And then the engineering evaluation cost
24 analysis was incurred to evaluate the VOC issue and some other
03:25PM 25 issues related to maintaining and complying with our permits

1 that were -- we had with the Division of Drinking Water.

2 And the last item on this list that I have
3 highlighted has to do with the preliminary work that we were
4 doing, knowing that down the road, we're going to have to also
03:25PM 5 employ perchlorate treatment on V-205.

6 So all of these things have to do with getting
7 permits and they are all necessary to comply with permit
8 requirements, which is one of the elements of consistency that
9 you have to evaluate.

03:25PM 10 Q So for the categories, we are looking at the
11 slide entitled "SCV Water Necessary and Consistent Response
12 Costs through November 2021." You evaluated each of those
13 categories under the three criteria that you set up for us?

14 A Yes.

03:26PM 15 MR. BLUM: Your Honor, I would object. A lot of
16 these costs are beyond the scope of his deposition and his
17 report, such as the EE-CA.

18 THE COURT: Overruled.

19 You can address this in any kind of briefing that
03:26PM 20 you wish to address with the Court.

21 MR. BLUM: Thank you, Your Honor.

22 Q BY MS. RICHARD: Okay. Let's move to the
23 perchlorate treatment implementation costs more specifically
24 that you have outlined.

03:26PM 25 Can you explain to us specifically for the

1 perchlorate treatment implementation costs why you have
2 testified those are recoverable under provisions of the NCP?

3 A Let's see if there is not a slide here. This
4 slide might help with that.

03:26PM

5 So one of the sections of the NCP that applies to
6 our costs here is Section 300.400(e), which says you have to
7 get appropriate permits. So in order to get these permits, we
8 had to -- we currently have the permit for Saugus 1 and
9 Saugus 2, but it has a condition in it --

03:27PM

10 Q You have to move your hand, sir. We can't hear
11 you very well.

12 A Oh, I'm sorry. We have a permit for Saugus 1 and
13 Saugus 2, but it has a condition in it that requires us to do
14 more work to get the VOC levels down to non-detect.

03:27PM

15 MR. BLUM: Your Honor, I cannot hear the witness.

16 THE COURT: It says to get the VOC levels down to
17 a non-detect.

18 But, Mr. Zelikson, all along, it's been a bit of
19 a challenge to hear you. So I don't know if you can speak more
20 loudly or do something on your end to make it a little easier
21 on our end.

03:27PM

22 THE WITNESS: Okay.

23 MR. RICHARD: Go ahead and yell at us,
24 Mr. Zelikson.

03:28PM

25 THE WITNESS: Hang on. I will try to do that.

1 Is that better?

2 THE COURT: Move in probably a little bit closer,
3 speaking a little more loudly, and doing what you did, I think,
4 will be useful. Thank you.

03:28PM

5 THE WITNESS: You're very welcome.

6 Q BY MS. RICHARD: You were going to explain the
7 various -- how the various requirements were fulfilled for the
8 costs we're looking at, and you were explaining -- we were
9 talking about perchlorate treatment and then you mentioned

03:28PM

10 VOCs. Can you explain to me how you evaluated the perchlorate
11 treatment requirements if, you know, there are -- first of all,
12 let me ask you. Are there any costs exclusively related to
13 VOCs?

14 A I don't think any costs are exclusively related
15 to VOCs. No.

03:29PM

16 Q So then how does your analysis for the various
17 costs you have identified relate to the perchlorate treatment
18 and perchlorate permit issues that you have identified?

19 A So the perchlorate treatment plan permit that we
20 have for Saugus 1 and Saugus 2 has a provision in it that says
21 we need to meet a standard of non-detect for VOCs. And we have
22 been working with the Division of Drinking Water through an
23 elaborate permit process which is occurring under a set of
24 regulations for what they call 97-005. But it is an elaborate
25 permitting process to evaluate what needs to be done to achieve

03:29PM

1 this goal of non-detect for VOCs.

2 So we have been spending money to try to work
3 through that process to deal with this essential noncompliance
4 situation that we have for the permits that we're holding for
03:30PM 5 Saugus 1 and Saugus 2.

6 Q And in general, what makes this situation unique
7 under 97-005? When does that generally apply?

8 A 97-005 applies to situations where you have --
9 what the Division of Drinking Water calls an extremely impaired
03:30PM 10 source of your water supply. They have designated the Saugus
11 aquifer as an extremely impaired source. It meets their
12 conditions for such a designation. And that has led to a more
13 complex permitting process and has led to these requirements
14 related to non-detect for VOCs.

03:31PM 15 Q I see.

16 So moving down your list, we have the EE-CA, the
17 engineering evaluation cost analysis, \$233,359. Why is that
18 included on this list of recoverable costs?

19 A The EE-CA is the evaluation of what needs to be
03:31PM 20 done in the long-term to address the VOC contamination at all
21 of the wells that we have. That would be for Saugus 1 and
22 Saugus 2, for V-201, probably V-205 as well. And I believe
23 there's VOCs in all of those wells.

24 So the EE-CA is coming up with and has come up
03:31PM 25 with a solution to address the VOC problem in all of the wells

1 that are drawing from the Saugus aquifer.

2 Q So how is it that EE-CA costs meet the threshold
3 for being necessary costs, in your view?

03:32PM 4 A Because you have to have a permit for all of
5 those wells. And in order to get that permit, you need to
6 address the issue of VOCs.

7 Q Have you seen a final version of that EE-CA
8 document?

9 A Yes.

03:32PM 10 Q And then you mentioned V-205 treatment system
11 design. What is that?

12 A That's -- there's been some early work done to
13 figure out and purchase some of the equipment that they
14 openly -- the water agency believes they will need to deal with
03:32PM 15 perchlorate treatment at V-205.

16 Q And what is it, in your view, that makes those
17 V-205 treatment system design costs necessary under the NCP?

18 A They are necessary to deal with the release of
19 perchlorate, and they are necessary to ultimately get a permit
03:33PM 20 for V-205.

21 Q And then you have a category of V-201 imported
22 replacement water supply. Do you see that?

23 A Down below.

24 Q Yes. Down below.

03:33PM 25 A Yes.

1 Q And what are those?

2 A Okay. So that the -- when V-201 went out of
3 service and was not able to be used for drinking water in the
4 water agency system, they started a process of building a
03:33PM 5 perchlorate treatment plant. But in the meantime, they had to
6 replace the lost water supply from not being able to operate
7 V-201. And they purchased that water from the State Water
8 Project.

9 Initially, Whittaker paid for those additional
03:34PM 10 costs. But in the last several years, they have not. And so
11 this 466,000 is the amount of money that the water agency has
12 incurred to continue to buy replacement water until they can
13 have a permit for V-201 and put that back into their
14 distribution system.

03:34PM 15 Q So from what period of time, roughly, do those
16 costs, the 466,000, when did Whittaker stop paying and you
17 started counting for V-201 imported replacement water?

18 A I'm not 100 percent sure of that. I think it's
19 around 2017 or 2018.

03:34PM 20 Q In your view, what is it about those replacement
21 water costs for V-201 that makes those costs necessary under
22 the NCP?

23 A Well, they are absolutely necessary to prevent --
24 V-201 had to go out of service, and it went out of service
03:35PM 25 because you don't want to provide water that has toxic

1 chemicals in it that is going to be violating DDW requirements.
2 So you take that out of service. And then the replacement
3 water is what we would call a time critical removal action cost
4 to address the lost water supply.

03:35PM

5 Q And then the last category you have, that
6 4.1 million for V-205 imported replacement water, what does
7 that reflect?

8 A That is basically the same thing for V-205.
9 V-205 went out of service because it was beginning to

03:35PM

10 experience levels of perchlorate that were of concern to the
11 water agency and DDW. So the water agency took that well out
12 of service, and they had to buy replacement water to account
13 for the lost water supply. And they have been doing that
14 since, I believe, 2012.

03:36PM

15 Q What is it about those costs for V-205 imported
16 replacement water that you believe makes them necessary costs
17 under the NCP?

18 A They're necessary to, on the one hand, avoid
19 putting water that has perchlorate in it into your distribution
20 system and it provides for the replacement water, is what we
21 call a time critical removal action, to make the water supply
22 whole again so that you can distribute water that is safe to
23 drink to the consumers of the water agency water.

03:36PM

24 Q Okay. So we've gone over the specific categories
25 of costs, but can you tell us how you evaluated NCP compliance

03:36PM

1 for these activity categories that you have been talking about?

2 A Yes. So these are the sections of the NCP that I
3 looked at that were applicable to those requirements. And most
4 of them, as I said, relate to permitting. Some of them relate
03:37PM 5 to documentation of the costs, which you can see by those
6 numbers, these numbers here that we -- those came from
7 invoices, for the most part. In some cases, it was estimates
8 from the water agency Chief Operating Officer.

9 The applicable requirements here is the section
03:37PM 10 of the NCP that says you have to comply with the requirements
11 of regulatory agencies. In this case, DDW.

12 And finally, we would perform a removal action
13 which is the time critical removal action that we talked about
14 for the replacement water and also for the EE-CA. The EE-CA is
03:37PM 15 a different kind of removal action, one where you have more
16 time to evaluate options. So in both cases, we evaluated both
17 the time critical removal action and the non-time critical
18 removal action activities against these sections of the NCP and
19 determined that our actions were consistent with those
03:38PM 20 requirements.

21 The water replacement cost, the time critical
22 removal action will require some further discussion, which
23 we -- I'm sure we will talk about later in my testimony.

24 Q So, yeah, I just wanted to ask you. Out of the
03:38PM 25 eight categories for the costs that you have identified, the

1 last two are treated differently in your work, that is, for
2 imported replacement water. Can you explain that?

3 A Right. Because the first grouping of those costs
4 has to do with getting permits. It's sort of like clear
03:38PM 5 obligations that you have in order to get, maintain, and obtain
6 a future permit. These all relate to permitting.

7 The water replacement costs have to do
8 specifically with making yourself whole by buying replacement
9 water so that you can continue to serve your customers safe
03:39PM 10 water to drink. And those would be classified under the NCP as
11 time critical removal actions. And so they are different than
12 the first grouping.

13 Q Okay. Well, just briefly, going through the
14 categories that you have listed here, you went through each of
03:39PM 15 these, the documentation requirement and satisfied yourself
16 that that requirement was met?

17 A Yes.

18 Q And then permitting, you have talked about that.
19 How did you satisfy yourself that that requirement was met?

03:39PM 20 A Well, we looked at all of the situations based on
21 a review of all the documents where we needed permits from one
22 of the state regulatory agencies. In this case, it was from
23 DDW or the Regional Water Quality Control Board. We obtained
24 those permits. So that was basically our analysis of that.

03:39PM 25 Applicable requirements has to do with these

1 requirements in the DDW permits that was imposing these --
2 particularly these VOC non-detect requirements on us. And
3 whatever we did to spend money to address those and we're still
4 spending money to address those uncertainties was the
03:40PM 5 applicable requirement related to addressing the VOCs.

6 Q Then talk to us about -- for a removal action,
7 you identified public participation. How did you evaluate
8 that?

9 A So there were two parts to that. There was the
03:40PM 10 EE-CA portion of it related to identifying a long-term solution
11 to the non-detect issue for VOCs. That was evaluated -- that
12 EE-CA went through all of the steps that one has to go through
13 to meet the NCP requirements for a non-time critical removal
14 action. They did -- they produced the document. They
03:41PM 15 evaluated alternatives. They presented it to the public. They
16 selected a remedy.

17 Then they went back to the public and explained
18 that the remedies were selected. And eventually that document
19 was signed off on by Matt Stone, who is the general manager of
03:41PM 20 the water agency. So that went through the entire public
21 participation process, as it should, because there was the time
22 allowed for doing such.

23 Q So for these first six categories, before we go
24 into detail on the replacement water, what was your conclusion
03:41PM 25 as to whether those first six categories met the requirements

1 for NCP compliance?

2 A That they all did meet the requirements.

3 Q Okay. And now let's talk about how did you
4 evaluate NCP substantial consistency for the last two
03:41PM 5 activities, this imported replacement water for V-201 and
6 V-205?

7 A So the first step in that process, as I mentioned
8 before, was to talk to the water agency, in this case
9 Keith Abercrombie who identified the amount of money associated
03:42PM 10 with all of those water purchases. I know that he's testified
11 in this trial already. And that we relied on his estimates of
12 what those costs were. That was in the previous table here,
13 466.

14 And he also did the same thing for the blending
03:42PM 15 order, by the way, that \$3 million costs. All of that water
16 had to be purchased from the State Water Project. So
17 Keith Abercrombie provided us the cost estimates for those
18 categories.

19 Then I had to make a decision as to what kind of
03:42PM 20 response action was this, and would it fit within the framework
21 of the NCP? And it seems clear to me -- and I don't think
22 there's really much controversy about this in the case -- that
23 in order to replace the lost water supply because these wells
24 went out of service, you had to take a quick action so that you
03:43PM 25 could continue to provide safe drinking water to the consumers

1 of the water agency water. So this was a time critical removal
2 action.

3 Q And that's what you call a TCRA?

4 A A TCRA, yes.

03:43PM 5 Q TCRA. Okay.

6 And what do you mean when you say there was --
7 what's the standard, if there is one, for what makes a removal
8 action a time critical removal action?

9 A That you have a very short time frame within
03:43PM 10 which to take the action to address, in our case, a threat to
11 public health. You have to replace the water with clean water,
12 and you have to do it quickly because the consuming public is
13 depending on you to do so.

14 Q Can you give us any examples in your experience
03:44PM 15 of time critical removal actions?

16 A Yes. And this is important because I think
17 there's many different types of time critical removal actions.
18 And I think, in my experience, having been involved with so
19 many of these, they all have some very typical characteristics.

03:44PM 20 This is what the slide is trying to communicate,
21 that they tend to be visible to the community, they're
22 potentially disruptive, they raise safety and health concerns,
23 and they involve these types of situations. You have a
24 contaminated soil that might be in the close proximity to a
03:44PM 25 resident. They can involve removal of drums. They could

1 involve replacement of drinking water, like for an individual
2 home that has a well, that the well becomes contaminated or
3 it's in a community with several wells that become
4 contaminated. You might have to replace the existing supply
03:45PM 5 with bottled water or require them to tie into a public water
6 supply system.

7 So there is -- the requirements for a time
8 critical removal action that are in the NCPs -- and the issue
9 here in this case is public involvement associated with that.

03:45PM 10 The public involvement requirements for the
11 typical time critical removal action anticipate these types of
12 situations.

13 I have another slide here which sort of visually
14 depicts sites I have seen personally many times where you find
03:45PM 15 some contamination. You have to bring your professionals in to
16 deal with the contamination. It becomes a visible sort of
17 community activity, if you will, and you have to then make sure
18 that the surrounding community knows what's happening and that
19 is what the regulations for public involvement anticipate, this
03:45PM 20 type of situation.

21 Q Let me just stop you there and ask you. Is
22 replacement water a typical time critical removal action, in
23 your experience?

24 A It can be depending on how it's done. And I
03:46PM 25 think -- like this last bullet on this slide, if you're telling

1 the community that they have to stop using their wells and they
2 have to use bottled water, that would be something that would
3 be, you know, very visible and very impactful. And you'd want
4 to be communicating with them about why you have to do that and
03:46PM 5 all of that.

6 Q Why don't we take that -- I just want to make
7 sure we're on the same page here.

8 In this case, was the replacement water different
9 than the typical time critical removal action?

03:46PM 10 A I believe very much so. Yes.

11 Q Can you explain that?

12 A Yes. I actually do have another slide that helps
13 with that, if I can use that.

14 So the first thing I said before I get into
03:47PM 15 putting this slide up is that the water agency has a system
16 which is built to use both groundwater and surface water on a
17 regular basis. They have the ability to change the ratio of
18 groundwater and surface water for a variety of reasons very,
19 very simply by --

03:47PM 20 MR. BLUM: Your Honor, I will object. This is
21 beyond the scope and assumes facts not in evidence.

22 THE COURT: I can't tell whether it's beyond the
23 scope. So I'm going to overrule it.

24 I am going to allow the parties to provide me
03:47PM 25 with a trial brief at the close of this case, and you can

1 include that if you wish. And make sure I get a response from
2 you, Mr. Richard.

3 MR. RICHARD: Yes, Your Honor.

4 THE WITNESS: Thank you.

03:47PM

5 So I do think that, because the water agency has
6 a water distribution system for its drinking water supply, that
7 it's set up to use both groundwater and surface water and they
8 can change the amount of both for a variety of reasons and have
9 done so over the years.

03:48PM

10 So when they had to increase the amount of water
11 they were buying, surface water from the State Water Project,
12 this was not really a new fact that the community -- that the
13 water agency didn't think the community needed to be specially
14 informed about. I agree with that.

03:48PM

15 Now, I will tell you, this slide talks about what
16 happened before the shutdown of the wells and after the
17 shutdown of the wells --

18 Q BY MR. RICHARD: Can you quickly go through that?

19 A Oh. Before, it was a mixture of local -- of

03:48PM

20 groundwater and imported water, and that's the same thing
21 afterwards. The quality of the water met the DDW requirements
22 before the shutdown and before they bought replacement water
23 and after. The water reliability was the same.

24 There was nothing visible happening. It was all
03:49PM 25 happening inside of the piping that the water agency had set up

1 over the years. And they have historically communicated with
2 their consuming public about the fact that their water was a
3 mixture of groundwater and surface water.

03:49PM 4 So the fact that they -- and the ratio changed
5 over time. The fact that this happened wasn't an event that
6 was consistent with these typical time critical removal actions
7 that we saw before in those photographs.

03:49PM 8 And even to say -- let me just, if I may,
9 counsel, the public involvement requirements for a TCRA are
10 already quite minimal just by the nature of the fact that you
11 have to take an action very quickly. You have to make some
12 notification to the community if you're dealing with drums in
13 your backyard. And you do have to indicate that -- if they
14 have a question, who they would call.

03:49PM 15 So the requirements of -- anyway, they do not
16 require that the public provide input to the party taking the
17 action before the action is taken, just because the action has
18 to be taken very quickly. So --

03:50PM 19 Q So let me ask you just to bottom line this. Are
20 you -- kind of break it down for us. Are you saying that
21 public participation requirement, that there is one for this
22 type of blending situation where -- that's the removal --
23 that's the upshot of the replacement water, is that the
24 blending ratios change? Let's start there.

03:50PM 25 A Well, I personally, after looking at this, do not

1 think that the TCRA public involvement requirements do apply to
2 what happened at the water agency related to buying replacement
3 water. I don't think they do apply. I can explain a little
4 bit more in a couple more slides why I don't think they are
03:51PM 5 even applicable.

6 So if you would --

7 Q Yes. Can you explain that. Sure. Go ahead.

8 A So quickly -- I think some of this was already in
9 the record. But the water agency provides lots of

03:51PM 10 documentation to their consuming public on a regular basis.
11 Within those documents, they speak about where their water
12 supply is coming from.

13 For example, they say that the water comes from
14 groundwater. It comes from surface water. So on a regular
03:51PM 15 basis, the community that we are trying to communicate with
16 here has had information that the water supply comes from both
17 of these sources.

18 Here's a chart --

19 Q Just so we're clear on the record, we are looking
03:51PM 20 at page 15 of this presentation that we're going to submit to
21 the Court as a regular numbered exhibit.

22 A Yes.

23 Q But it's called Additional Information Conveyed
24 to Public. Water Supply Utilization. What does this chart
03:52PM 25 tell you, and why is it important to the public participation

1 issue?

2 A What this chart shows is that over the years --
3 it starts in 1980 and it ends in 2018, I believe, that --
4 2018 -- that this information comes out of the various
03:52PM 5 publications that the water agency has been giving to its
6 consuming public over all these years.

7 What they say is -- what this chart shows is that
8 there is a variability in the amount of water that is purchased
9 from the State Water Project, which is surface water, and the
03:52PM 10 groundwater. The groundwater is in green. The State Water
11 Project is in the darker color blue.

12 So all along the consuming public knows that for
13 a variety of reasons, the amount of water -- the ratio of the
14 groundwater to surface water varies over time. So the fact
03:53PM 15 that it now is varying again is really not a new piece of
16 information.

17 So I think this goes back to what I said in the
18 beginning which is that this is the context within which
19 someone has to make a judgment whether or not those
03:53PM 20 requirements related to public involvement apply in our
21 particular case.

22 With these site specific facts, in my view, I
23 don't think they do.

24 Q Okay. Was there any other information along
03:53PM 25 these lines conveyed to the public that you reviewed?

1 A So this is a statement from the Urban Water
2 Management Plan which communicates the same thing, that there's
3 different blends of well water and imported water at different
4 times. This is just a narrative way of explaining what that
03:53PM 5 more comprehensive chart has explained.

6 So I think these are all important contextual
7 pieces of information that go into the question of: Even
8 though the requirements for public involvement for a TCRA are
9 fairly minimal, I think it's not a big stretch to say -- I
03:54PM 10 don't think they are applicable at all in our case because
11 nothing -- I mean, a few times --

12 MR. BLUM: This is a legal conclusion for the
13 Court.

14 THE COURT: Sustained.

03:54PM 15 Q BY MR. RICHARD: Okay. Let's move on.

16 I want to ask you: Was Whittaker considered part
17 of the community or the public?

18 A I don't exactly know what Whittaker received.
19 But I think given their historical involvement and the amount
03:54PM 20 of money they paid historically, that they would have availed
21 themselves --

22 MR. BLUM: Objection. Speculation.

23 THE COURT: Sustained.

24 Q BY MR. RICHARD: Can you describe for us what
03:54PM 25 information you do have about Whittaker's interactions with the

1 regulators or, otherwise, in which they would have received the
2 information you have been describing?

3 A Yes. This is what this slide is about. But this
4 is the factual part of it. They paid for the capital costs for
03:55PM 5 V-201. They paid for the operating costs for a period of time.
6 They participated in this task force. And they certainly
7 participated in the earlier settlement. So that, I know. So I
8 think they have had regular interactions, and they should know
9 pretty much what the public knows.

03:55PM 10 MR. BLUM: Objection. Speculation.

11 THE COURT: Sustained on the last point.

12 Just stick with the facts, please, Mr. Zelikson.

13 THE WITNESS: Okay. I will.

14 Q BY MR. RICHARD: What is your understanding as to
03:55PM 15 the sources of the information Whittaker would have had
16 regarding this time critical removal action in the replacement
17 water?

18 A It would have been -- again, I think we're going
19 to run into the same issue. But I think it would have been --
03:56PM 20 they could have availed themselves of the same information that
21 was on the website of the water agency and that the consuming
22 public had.

23 Q Okay. So what is your -- you reviewed those
24 records on the water agency's website?

03:56PM 25 A Yes.

1 Q And does the water agency allow the public to
2 provide comments on the activities you previously described?

3 A Yes.

4 Q And did you see any information that Whittaker
03:56PM 5 provided comments on any of those activities?

6 A No. I couldn't say that.

7 Q Okay. So how are the efforts you just described
8 as various disclosures to the public about the ratios,
9 et cetera, and public meetings, how are those efforts related
03:57PM 10 to or relevant to the replacement water time critical removal
11 actions and your conclusions in this matter?

12 A Okay. So what -- based on what I laid out, I
13 don't believe that the notification requirements for the type
14 of TCRA that we have taken here, which has given rise to these
03:57PM 15 replacement water costs, that the public involvement provisions
16 are applicable. I understand that that -- you know, that's a
17 decision for Judge Blumenfeld to make.

18 I would also just say that, again, within the NCP
19 framework itself, it speaks to situations like this where you
03:57PM 20 might have an immaterial deviation from the specific
21 requirements. And it specifically says that, if there is such
22 a situation, it shouldn't serve to defeat an otherwise
23 important, necessary, and effective response action.

24 So my conclusion is that one way or the other, I
03:58PM 25 think these water replacement costs should be recoverable --

1 MR. BLUM: Objection, Your Honor. This is a
2 legal conclusion for the Court.

3 THE COURT: It is.

4 Mr. Zelikson, when you're referring, however, to
03:58PM 5 the NCP framework and its discussion about immaterial
6 deviation, what specifically are you relying upon?

7 THE WITNESS: These are statements within the NCP
8 itself and the preamble to the NCP that say that part of the
9 reasons that -- and this is written in those documents --
03:58PM 10 that --

11 THE COURT: I think I can stop you, Mr. Zelikson,
12 because I'm looking for a citation to a legal source, not to
13 what it says.

14 So you're relying upon the preamble to the NCP?

03:59PM 15 THE WITNESS: And the NCP itself.

16 THE COURT: All right. Thank you.

17 Mr. Richard.

18 MR. RICHARD: Sure. We're almost done,
19 Your Honor.

03:59PM 20 Q The -- I wanted to ask you about: Did the
21 SCV Water notify the public of a shutdown of those wells and
22 its intent to replace those supplies with imported water?

23 A Eventually they did, yes.

24 Q And so, in your experience, why wasn't that a
03:59PM 25 material deviation from substantial compliance with the NCP?

1 A Well, I think that, if you look at the straight
2 requirement there, there's, I think, an easy implication that,
3 if you're -- it should be done in a reasonable time frame. And
4 I think that the notification which came in later and later
04:00PM 5 documents probably was different than what the expectation is
6 in those regulations, which -- to make a more immediate
7 notification. But that speaks to my belief that these
8 requirements are really not applicable to our situation.

9 Q So in your experience, what is it about this
04:00PM 10 specific situation that -- I mean, public participation is
11 important under the NCP, isn't it?

12 A Most definitely it is, yes.

13 Q So what is it about this site specific situation
14 and these specific activities under review in your experience
04:00PM 15 that lead you to believe that additional public notification
16 was immaterial or an insubstantial shortcoming?

17 A Well, there was really nothing to communicate
18 that the public didn't already know.

19 MR. BLUM: Again, I would move to strike as
04:01PM 20 speculation.

21 THE COURT: I'm going to overrule that objection,
22 taken in the context of his previous testimony concerning what
23 disclosures that were regularly made. I take it limited to
24 that point.

04:01PM 25 MR. RICHARD: Thank you, Your Honor.

1 Q So can you bottom line for us what your
2 conclusion regarding NCP compliance of the water replacement
3 costs is, sir?

4 A I believe that the water agency has fulfilled its
04:01PM 5 obligation to comply with the requirements of the NCP.

6 Q And were there any facts, factors, or anything
7 that I missed in our Zoom communication here?

8 A No. I think we have got it.

9 Q All right.

04:01PM 10 A Yeah.

11 MR. RICHARD: Then I will leave it there. Thank
12 you very much.

13 THE COURT: Before you leave, I do actually have
14 a question or two.

04:01PM 15 So I want you to assume, Mr. Zelikson, that this
16 is not a time critical response action -- and I'm not saying
17 that that's the Court's conclusion. But if it were not a TCRA,
18 as you say, then what would you anticipate would have occurred
19 with respect to public participation that did not occur here?

04:02PM 20 What would you advise as a consultant?

21 THE WITNESS: Well, if it's not a -- if it's not
22 a TCRA, it still is a removal action. So the only other real
23 choice is a non-time critical removal action, which means that
24 it would be subject to identifying alternatives and evaluating
04:02PM 25 the cost of those. The specific provisions of a TCRA say that

1 you need six months. If you have more than six months, you can
2 do a non-time critical removal action process.

3 But I don't think that we had six months. We had
4 to take an action right away to replace the lost water supply.

04:03PM

5 THE COURT: And what productive purpose, in your
6 view, or do you say there is no productive or benefit, in going
7 through a broader public participation process? You said
8 identifying alternatives and measuring the costs, weighing
9 them.

04:03PM

10 Maybe first let me start with an easier question
11 or a shorter question. Do you see a benefit if there were time
12 to go through that process?

04:03PM

13 THE WITNESS: Honestly, I don't, Your Honor,
14 because I don't think the water agency had an alternative but
15 to use its system the way it was designed, which was very
16 robust but to immediately change the ratio of groundwater to
17 surface water and bring the surface water in to replace the
18 lost groundwater supply.

04:04PM

19 THE COURT: So at least based on the information
20 available to you, it's your opinion that, if, in fact, there
21 were a robust public participation process in a non-time
22 critical response, your advice, essentially, would be that
23 there is nothing to do beyond what the agency did here?

24 THE WITNESS: Yeah.

04:04PM

25 THE COURT: Would you have advised the agency to

1 do something different than it did here if, in fact, they had
2 more than six months?

3 THE WITNESS: Well, if they had more than six
4 months, yeah. Just like when they were looking at the VOC
04:04PM 5 situation and they had to make a decision in the long run how
6 to permanently deal with these non-detect requirements that DDW
7 was imposing on them.

8 They had more than six months to do that, and
9 they took it. And they did have real options there. And those
04:05PM 10 options are laid out in that EE-CA document.

11 So yeah, I would have told them to do an EE-CA.
12 But I don't think this was an -- I know you gave me a different
13 premise, but I don't think this is a non-time critical
14 situation. You had to take an action right away to replace the
04:05PM 15 lost supply.

16 THE COURT: What about the possibility of using
17 stored up supply that they had for a drought situation?
18 Couldn't they have done that?

19 THE WITNESS: I understand what you're saying.
04:05PM 20 I'm not completely conversant, but I think that would -- that
21 supply is there for a reason. So if they took it from there,
22 there would be all kinds of implications about how to replace
23 what they took out.

24 So I don't know -- I can't give you a great
04:05PM 25 answer to that. I don't think that's without a lot of

1 complications.

2 THE COURT: I didn't know whether you had been
3 given that information, so I will just leave it at that.

4 MR. RICHARD: I will let you ask the questions
04:05PM 5 next time, Your Honor.

6 THE COURT: Let's have Mr. Blum, please, on
7 cross-examination.

8 MR. BLUM: Your Honor, may I have a quick moment,
9 please?

04:06PM 10 THE COURT: Yes.

11 **CROSS-EXAMINATION**

12 BY MR. BLUM:

13 Q How are you, Mr. Zelikson?

14 A I'm good. How are you?

04:06PM 15 Q Oh, I want to finish this so we can all go home.

16 Sir, even in a TCRA, if the removal action is
17 going to last more than 120 days, aren't there public
18 participation requirements?

19 A Yes.

04:06PM 20 Q All right. Let's talk about those for a moment.
21 You know what, before I do, I want to get some specific facts
22 laid out.

23 What was the date for 201 in which the need to
24 purchase replacement water arose?

04:07PM 25 A I don't know the exact date.

1 Q Can you give me the year?

2 A I kind of think it was in the 2010 time frame.

3 Q Well, if I told you that for 201 Whittaker was
4 paying for replacement water through December of 2017, would
04:07PM 5 that affect your opinion?

6 A No.

7 Q So if Whittaker was paying for replacement water,
8 was there a need for the water agency to purchase replacement
9 water for 201?

04:07PM 10 A Yes. But you -- well, you were paying for it.
11 Right. So you paid them, and they paid the State water
12 contract.

13 Q Right. But the emergency that arose for the
14 agency didn't arise until Whittaker stopped paying for the
04:08PM 15 water; correct? If there ever was an emergency.

16 A Now you're parsing it by who pays. I think the
17 fact that they -- that water had to be purchased as soon as the
18 well was out of service is the issue.

19 Q All right. Well, in terms of the amount of money
04:08PM 20 that was expended for -- by the agency for replacement water,
21 would you agree that that did not begin until Whittaker stopped
22 paying for it?

23 A Yes.

24 Q All right. If -- for 205, if I tell you that
04:08PM 25 Whittaker paid for replacement water until April 1st, 2012,

1 would you agree with me that the obligation for the water
2 agency to incur expenses didn't begin until after that date?

3 A Yeah. I'm not familiar with those facts. But
4 yes, if that's the facts, then I would agree.

04:09PM 5 Q All right.

6 A Yeah. I don't think you're equating the
7 emergency to having to pay for it versus the emergency of
8 having to replace the water. I'm not sure that's a good
9 equation.

04:09PM 10 Q All right. Now, at the time that the obligation
11 arose for the water agency -- let's go back to V-201 -- can you
12 tell me whether or not there was sufficient capacity within
13 their existing pumping system to replace the water without
14 purchasing more from the State Water Project?

04:10PM 15 A I can't tell you that, no.

16 Q Okay. Now, if there was enough capacity, would
17 there be an emergency?

18 A I don't know. I mean, I just -- I understand
19 that it's not so simple to make the plumbing changes that
04:10PM 20 you're suggesting.

21 Q All right. Well, can you testify that simply
22 saying, well, this well will pump a little bit more involves
23 any plumbing changes at all?

24 A I can't say.

04:10PM 25 Q Would the same questions for V-205 be the same

1 answers?

2 A Yes.

3 Q All right. Now, in terms of the 120 days issue,
4 does the public have the right to comment on whether or not the
04:10PM 5 remedy chosen is cost effective?

6 A This goes back to -- 120 -- you have to go back,
7 if you will, or refer you back to those photographs. If you're
8 going to be on site for the visible activity for more than
9 120 days, then you have to involve the public in a more
04:11PM 10 elaborate process. But that's not what we were doing. We were
11 just turning our valves and changing the ratio of surface water
12 to groundwater which was a routine activity.

13 So I don't think the fact that we did it more
14 than 120 days affects our obligation to involve the public
04:11PM 15 because, as I tried to explain in my testimony, this is not
16 your typical TCRA.

17 Q Doesn't the regulation state, if the removal
18 action is going to last more than 120 days, A, B, C, and D has
19 to occur?

04:11PM 20 A Right. But as I mentioned in my testimony, the
21 kind of actions that were thought of in the creation of that
22 requirement had to do with very visible, potentially disruptive
23 onsite activities. For that, of course, you would have to
24 involve the public. That's not what we have here at all.

04:12PM 25 Q Can you point to that portion of the NCP that

1 says you could ignore the 120-day requirement if what you're
2 going to do really isn't that important or the public really
3 isn't going to care or any other exception that you think
4 applies in this case?

04:12PM

5 A Just my --

6 Q I'm looking to the NCP.

7 THE COURT: Hold on, Mr. Blum. You asked the
8 question, you didn't give him a chance to respond.

04:12PM

9 Mr. Zelikson, you can respond? And the question
10 is: Can you point to any portion of the NCP that supports your
11 position?

12 THE WITNESS: The NCP is -- I'd have to look for
13 it, but it's replete with language, like "if applicable," "as
14 appropriate." It would not be appropriate to apply those
15 requirements that you're referring to in a situation that we
16 have here where we're -- everything is happening inside a pipe
17 and we are changing the ratio of water.

04:13PM

18 So the fact that it's lasting more than 120 days
19 doesn't really matter because the original requirement doesn't
20 apply anyway. That's based upon my -- you know, whatever you
21 want to say, 40 years of experience doing this. It just
22 doesn't apply. That's why this whole thing about rigid
23 application of the regulations without thinking about what's
24 going on in the specific site situation is so important when
04:13PM 25 you're making these judgments.

1 Q Again, can you point to a specific section of the
2 NCP that supports that the 120-day requirement for public
3 participation isn't applicable under the facts as you're aware
4 of them?

04:14PM

5 A Only that it's -- only that you have to make a
6 determination whether it's applicable in the first place. That
7 determination I have already made. So obviously,
8 Judge Blumenfeld will make the final determination on that.

04:14PM

9 But I don't think it applies in the first place; therefore, the
10 fact that it's lasting more than 120 days is not really
11 relevant.

12 Q All right. Let's talk about V-205. Is part of
13 the basis of your opinion that the concentrations of
14 perchlorate in V-205 required that the well not be utilized?

04:14PM

15 A Yes. But -- there's more to it than that, but
16 yes.

17 Q When was the first reading for V -- sorry -- for
18 perchlorate in V-201 over an MCL?

04:15PM

19 A I don't know the answer to that question exactly,
20 but --

21 Q Now, I want you to assume that Mr. Abercrombie
22 sent a letter to the DDW in August of 2012, which is Exhibit 98
23 which has been stipulated into evidence, and said the
24 concentrations of perchlorate in this well are below the MCLs
25 but we're going to shut it down anyway. Is that a sufficient

04:15PM

1 necessity under the NCP?

2 A If you look at it just that way, which is not the
3 way it should be looked at, it's not about an MCL. Right?

04:15PM

4 It's about what's happening to that well. I mean, the rest of
5 that story is that V-201 was shut off. V-205 was operating and
6 was in the -- it was sucking in chlorite contaminated water.

04:16PM

7 The water agency said, I don't want that well to
8 exceed the MCL perchlorate. I'm concerned that it will because
9 it is now the only well operating in that area because V-201 is
10 down. They were concerned about it. They didn't want to say,
11 oops, excuse me, public. We just delivered you water that
12 exceeded the MCL.

04:16PM

13 So they went to the DDW and they said, You know
14 what? It seems prudent, given the facts about how this well is
15 now beginning to rise in its levels and the fact that it is --
16 the more that we operate it, the more it is going to suck in
17 the contaminant agent --

04:16PM

18 THE COURT: One second. One second, sir. The
19 more that we operate, the more it is going to suck in
20 contamination?

21 THE WITNESS: Yes. And the -- they felt -- the
22 water agency felt that they should shut the well down to
23 prevent it from exceeding the MCL. They presented that to DDW.
24 DDW said two things.

04:17PM

25 THE COURT: One second. One second. We're

1 having problems with the technology.

2 All right. You know what? I'm going to end your
3 answer right there. I think I have the gist of it.

4 Let's have another question asked.

04:17PM 5 Q BY MR. BLUM: Mr. Zelikson, please cite me to the
6 document where the water agent for the DDW told the water
7 agency that they should shut down V-205 even though the
8 perchlorate concentrations were not above the MCL.

9 A I can't do that as I sit here, but I believe we
04:17PM 10 have that document.

11 Q Now, sir, have you taken a look to see whether or
12 not there were actually alternatives available to the water
13 agency, other than purchasing water from the State Water
14 Project?

04:18PM 15 A Is this coming from Mr. Blum?

16 Q Yes, sir.

17 A Okay. No. I didn't take a look at that because
18 I relied on the water agency judgment that the only reasonable
19 thing that they could do in the time frame associated with
04:18PM 20 having -- taken action that was time critical was to use the
21 State Water Project water.

22 Q Did you discuss with Mr. Abercrombie whether or
23 not there were alternatives?

24 A I have not had that conversation. My staff has
04:18PM 25 had that conversation with him.

1 Q Can you testify that the only alternative
2 available to the water agency was to purchase water from the
3 State Water Project?

4 A The only reasonable alternative, yes.

04:19PM

5 Q And did you discuss with anybody or anybody on
6 your staff discuss with anybody at the water agency why
7 purchasing water from the State Water Project was the only
8 reasonable alternative?

04:19PM

9 A There were technical complications associated
10 with any other option that had significant impacts on how they
11 operated their system. And in order to replace it in a
12 reasonable time frame, consistent with the time critical
13 removal action, that's to replace the lost supply, they really
14 didn't have any other options. That's my understanding.

04:19PM

15 Q Well, I want you to assume that a few days ago
16 Mr. Abercrombie testified that the water agency had available
17 to it banked water which it could have used and all that would
18 happen is that that banked water would be delivered via the
19 same mechanism that the State Water Project water was
04:20PM 20 delivered. Was that alternative considered?

21 A By Mr. Abercrombie at the time? I don't know for
22 sure. I think so.

04:20PM

23 Q All right. I want you to assume that
24 Mr. Abercrombie testified that there were contracts with, I
25 believe, Kern County and Yolo County at the time which could

1 have delivered water to the agency. Was that alternative
2 considered?

3 MR. RICHARD: Objection. Misstates testimony and
4 assumes facts not in evidence, Your Honor.

04:20PM 5 THE COURT: I'm going to sustain it as you have
6 framed it.

7 Q BY MR. BLUM: Were you -- I want you to assume
8 that Mr. Abercrombie testified that there were contracts with
9 at least two counties for delivery of water that could have
04:20PM 10 been used in lieu of State Water Project water. Was that
11 considered by you in determining whether or not the SCV Water
12 was the only alternative?

13 MR. RICHARD: Same objection.

14 THE COURT: Overruled, with this qualification.
04:21PM 15 If you assume what Mr. Blum has represented to you is accurate
16 and factual, would that qualify as a reasonable alternative?

17 THE WITNESS: I would need to have more facts
18 about the costs associated with that and the practicality of
19 doing such.

04:21PM 20 Q BY MR. BLUM: Is one of the documents that you
21 were given to look at in terms of your testimony the 2010 Urban
22 Water Management Plan?

23 A Yes.

24 Q Do you have that in front of you, sir?

04:21PM 25 A No.

1 Q Can you get it in front of you?

2 A I don't know. It's a very large document. I
3 don't think I have access to it here right now.

04:22PM 4 Q All right. Well, then I will ask you to -- it's
5 Exhibit 489 already in evidence. I want you to assume that in
6 Section 6.3.3 under the section State Water Project Table A
7 Supply, there is a discussion of alternate water sources,
8 including Big Delta Conservation Plan, Flexible Storage
9 Account, Buena Vista/Rosedale Water, Nickel Water Newhall Land,
04:22PM 10 Semitropic Banking Program, Semitropic Banking Program
11 Newhall Land, Rosedale-Rio Bravo Banking Program and -- plus
12 additional plan banking as alternate water sources.

13 Were any of these discussed by you as alternates
14 to purchasing water from the State Water Project?

04:22PM 15 A No.

16 Q If these were alternatives, didn't the public
17 have the right to comment on whether buying water from a State
18 Water Project was more cost effective than these other
19 alternate sources?

04:23PM 20 A You're assuming that it's not a TCRA when you're
21 saying that. It's just using the lingo; right? That you had
22 an unlimited amount of time to evaluate all these options. And
23 what I'm saying is that if that if this is a TCRA, we don't
24 have that time to make those evaluations and look at those
04:23PM 25 alternatives.

1 Q Even if it is --

2 A You have to assume -- yes.

3 Q I'm sorry. I'm sorry. I didn't mean to
4 interrupt you, sir.

04:23PM 5 A That's okay. Go ahead.

6 Q Even if it is a TCRA, this removal action lasted
7 longer than 120 days; right?

8 A That doesn't matter.

9 Q Am I right, it lasted -- it lasted more than
04:23PM 10 120 days?

11 A Yeah. So that doesn't really change anything.

12 Q After the 120 --

13 A There are --

14 Q After the 120 days, is it your opinion that the
04:24PM 15 public had no right to comment and say, hey, what you're doing
16 now is not cost effective. It's raising our rates. You should
17 do something else?

18 A How do you know it's raising the rates?

19 Q I don't know. Is that something that the public,
04:24PM 20 though, had a right to comment on and make that argument if
21 they wanted?

22 A Well, yeah. If the premise is that this is not a
23 TCRA -- the 120 days really doesn't matter. I mean, if this is
24 a TCRA, you take the action. There's no need to involve the
04:24PM 25 public or to evaluate alternatives.

1 There are emergency removal actions that go on
2 for years. And you don't need to involve the public in those.
3 So I just think the first decision is: Is this a TCRA or not?
4 If it is a TCRA, you don't have to do those kinds of
04:25PM 5 evaluations.

6 Q All right. All right. Mr. Zelikson, I just have
7 a couple more questions, and then we're done.

8 Can you point to any part of the NCP that says,
9 if it is a TCRA, the 120-day public participation requirement
04:25PM 10 doesn't apply?

11 A Well, I would say in our case -- I'm only going
12 to -- I'm most familiar with the facts and circumstances of our
13 situation. I think that the original requirements for the TCRA
14 to notify the public are not applicable, in my view. And,
04:25PM 15 therefore, the fact that it's lasting more than 120 days
16 doesn't matter, the way I look at it.

17 Q All right. But you can't point the Court to a
18 specific section of the NCP that says that; correct?

19 MR. RICHARD: Objection. Asked and answered,
04:26PM 20 Your Honor.

21 THE COURT: It wasn't answered. Not this
22 particular --

23 THE WITNESS: No, I can't.

24 Q BY MR. BLUM: I'm sorry. I'm sorry. Go ahead.

04:26PM 25 A No. Go ahead.

1 Q Can you point to an order from the DDW that
2 states that there is -- that they are going to shut down or
3 restrict the ability of the water agency to utilize wells,
4 Saugus 1 and Saugus 2, if there is -- if the VOC contamination
04:26PM 5 found in the turnouts was not non-detect?

6 A No. I can't do that.

7 MR. BLUM: That's all, Your Honor.

8 THE COURT: Mr. Richard?

9 MR. RICHARD: I think we will leave it there. I
04:26PM 10 don't have any questions, Your Honor.

11 THE COURT: Very well. Then you are excused.
12 Thank you, Mr. Zelikson.

13 THE WITNESS: You're very welcome. Thank you,
14 Your Honor.

04:27PM 15 MR. RICHARD: Take care.

16 THE WITNESS: Can I just leave?

17 THE COURT: Yes. You could just -- and we will
18 do it on our end in just a moment.

19 All right. And so you have no further witnesses
04:27PM 20 or evidence that you intend to introduce for purposes of the
21 bench trial?

22 MR. RICHARD: With the exception of evidence that
23 is presented to the jury. So some of what
24 Mr. Keith Abercrombie testified to will be relevant, and we
04:27PM 25 would cite it in our closing brief. And some of the testimony

1 from Mr. Masnada tomorrow will address some of these issues.

2 But we have no separate witness solely for the bench trial.

3 THE COURT: Thank you.

4 And, Mr. Blum, you do have a witness, and your

04:27PM 5 witness is available tomorrow?

6 MR. BLUM: Your Honor, the answer is I'm not

7 sure. I have a witness, and I may not even call him if I do.

8 And, in fact, Your Honor, it's my -- I had told Mr. Masard --

9 and I take the responsibility fully -- that he would not be

04:28PM 10 needed until next week because I thought he would be part of

11 our case. He's not available until Monday or Tuesday.

12 But my guess is, if you give me until tomorrow,

13 I'm probably not even going to call him. I just need to take a

14 look at this testimony tonight and see if it comports with what

04:28PM 15 I believe the witness said.

16 THE COURT: All right. I will hear from you

17 tomorrow, then. You will let me know.

18 MR. BLUM: Thank you, Your Honor.

19 THE COURT: All right. And then at this point, I

04:28PM 20 don't believe there are any outstanding issues for the Court to

21 address, other than the jury instructions. Are there any

22 outstanding issues, Mr. Richard, before we start the

23 examination tomorrow for the plaintiff?

24 MR. RICHARD: I'm thinking about Your Honor's

04:29PM 25 question. Not with Mr. Masnada.

1 So our damages expert, I have some disputed
2 exhibits. But, frankly, I would like the opportunity to make
3 one more run with Mr. Blum on those. But he probably won't be
4 up until Wednesday, in any event, just judging.

04:29PM

5 So with the exception of these disputed exhibits
6 that I have in front of me for Dr. Najm, our damages fellow,
7 I'm not aware of any other issues that require the Court's
8 attention.

04:29PM

9 THE COURT: And remind me again of who you
10 anticipate calling tomorrow.

11 MR. RICHARD: Mr. Masnada, then Dr. Trudell, and
12 then Dr. Najm, if there's time.

13 THE COURT: And what is your assessment as to
14 whether there is going to be time for Dr. Najm tomorrow?

04:29PM

15 MR. RICHARD: Oh, and I also forgot we have that
16 hour video play. So we will probably end with the video
17 tomorrow.

04:30PM

18 So I think that it's possible we will get to
19 Dr. Najm. I have been trying to guess on the
20 cross-examination. Sometimes it runs long. Sometimes I run
21 long and sometimes I don't.

04:30PM

22 So my best guess is that Mr. Masnada,
23 Dr. Trudell, and then the Peloquin video. My practice would be
24 to notify Dr. Najm at the first break, that we are running
25 faster and have him here by 1:00 o'clock, if needed, to finish

1 the day.

2 THE COURT: All right. And are there any issues
3 for the defense before we start tomorrow?

4 MR. BLUM: No, Your Honor.

04:30PM 5 THE COURT: All right. How many challenged
6 exhibits are there with Dr. Najm? I understand we did receive
7 those exhibit binders today. But approximately how many
8 challenged exhibits are there?

9 MR. RICHARD: Right. So I can just tell by
04:31PM 10 looking at this that late last night some of the objections
11 were withdrawn. So I really do think I need the opportunity to
12 get to the nub of it here with opposing counsel.

13 With the bulk of those withdrawn, I don't think
14 we will have more than one or two, if any. I'm hoping to
04:31PM 15 resolve it. But I can see that most of them were withdrawn
16 late last night for our fellow's charts.

17 THE COURT: All right. In that event, I will
18 have the parties come tomorrow at 8:30 since I, therefore,
19 really can't do anything productively, looking at Dr. Najm's --
04:31PM 20 the objected-to exhibits, since many of them are apparently not
21 going to be objected to.

22 So with that, we are in recess on this matter,
23 and I will see everyone here tomorrow at 8:30.

24 We're off the record.

04:34PM 25 (Proceedings concluded at 4:34 p.m.)

CERTIFICATE OF OFFICIAL REPORTER

I, MIRANDA ALGORRI, FEDERAL OFFICIAL REALTIME COURT REPORTER, IN AND FOR THE UNITED STATES DISTRICT COURT FOR THE CENTRAL DISTRICT OF CALIFORNIA, DO HEREBY CERTIFY THAT PURSUANT TO SECTION 753, TITLE 28, UNITED STATES CODE THAT THE FOREGOING IS A TRUE AND CORRECT TRANSCRIPT OF THE STENOGRAPHICALLY REPORTED PROCEEDINGS HELD IN THE ABOVE-ENTITLED MATTER AND THAT THE TRANSCRIPT PAGE FORMAT IS IN CONFORMANCE WITH THE REGULATIONS OF THE JUDICIAL CONFERENCE OF THE UNITED STATES.

DATED THIS 23RD DAY OF NOVEMBER, 2021.

/S/ MIRANDA ALGORRI

MIRANDA ALGORRI, CSR NO. 12743, CRR
FEDERAL OFFICIAL COURT REPORTER

\$	975:23, 976:15	1:00 [1] - 979:25	981:15	5-inch [1] - 901:14
\$233,359 [1] - 941:17	120-day [3] - 968:1, 969:2, 976:9	1ST [1] - 847:24	205 [15] - 889:7, 906:1, 906:5, 907:11, 907:17, 907:21, 907:22, 908:5, 909:25, 910:12, 910:14, 910:15, 910:17, 913:15, 965:24	5.6 [1] - 883:4
'	125 [1] - 921:25	1st [1] - 965:25	22 [2] - 847:14, 851:1	50 [7] - 848:10, 853:8, 853:11, 880:7, 880:8, 880:10, 882:12
'14 [1] - 853:24	12743 [2] - 847:23, 981:19	2	23RD [1] - 981:15	500 [2] - 848:15, 865:19
'15 [1] - 853:24	12:57 [2] - 847:14, 851:1	2 [39] - 852:6, 858:21, 863:21, 868:24, 886:13, 886:14, 886:17, 886:19, 888:18, 889:7, 889:12, 889:24, 890:22, 891:1, 891:10, 891:19, 893:4, 893:12, 893:13, 893:23, 894:10, 898:11, 902:21, 903:8, 903:20, 903:24, 908:11, 908:13, 911:23, 912:4, 921:19, 924:3, 937:14, 939:9, 939:13, 940:20, 941:5, 941:22, 977:4	24-inch [1] - 913:21	6
'16 [1] - 853:24	1312 [1] - 853:5	2,500 [1] - 914:10	25 [3] - 920:6, 921:20, 922:13	6,000 [2] - 884:4, 884:10
'17 [1] - 853:24	15 [3] - 867:18, 917:19, 954:20	2,500-gallon-a-minute [1] - 913:20	28 [1] - 981:8	6.3.3 [1] - 974:6
'18 [2] - 853:25, 856:3	15.9 [3] - 935:20, 935:21, 936:9	20 [6] - 863:5, 891:23, 908:10, 908:13, 914:9, 922:7	29 [1] - 869:11	7
'50s [1] - 867:8	158 [3] - 858:14, 886:11, 905:25	200 [2] - 896:1, 922:10	2:37 [3] - 917:10, 917:18, 917:22	7 [1] - 878:1
'80s [2] - 859:21, 887:3	163 [3] - 908:10, 908:12, 908:13	2002 [2] - 891:22, 895:9	2:52 [1] - 917:19	7.2.3 [1] - 854:16
'90s [1] - 859:21	164 [2] - 908:11, 908:13	2006 [2] - 891:25, 924:21	3	7.2.4.2 [1] - 881:12
'95 [1] - 920:10	169 [5] - 850:4, 888:10, 888:14, 890:6, 894:18	201 [7] - 909:25, 910:2, 910:13, 910:15, 964:23, 965:3, 965:9	3 [1] - 948:15	7.4.4.2 [1] - 881:2
/	173 [1] - 912:17	2010 [4] - 886:25, 887:13, 965:2, 973:21	3,000 [1] - 883:5	7.6 [2] - 935:6, 935:22
/S [1] - 981:18	179 [5] - 850:5, 871:15, 871:17, 871:18, 872:8	2012 [3] - 944:14, 965:25, 969:22	30 [2] - 914:9, 922:7	700 [3] - 848:16, 878:3, 878:7
0	18 [2] - 869:7, 888:11	2013 [3] - 852:22, 853:24, 856:3	30,000 [1] - 929:10	753 [1] - 981:8
0.87 [2] - 881:8, 881:25	18-06825-SB [1] - 847:7	2015 [1] - 909:13	300.400(e) [1] - 939:6	777 [1] - 848:6
1	180 [4] - 850:6, 872:2, 872:4, 872:8	2017 [3] - 897:17, 943:19, 965:4	31 [1] - 895:10	8
1 [28] - 863:21, 870:25, 876:1, 886:10, 886:13, 886:14, 888:18, 889:6, 889:11, 889:24, 890:21, 891:1, 891:9, 891:19, 893:4, 896:14, 899:2, 902:21, 911:22, 912:4, 920:16, 937:14, 939:8, 939:12, 940:20, 941:5, 941:21, 977:4	182 [5] - 850:7, 872:17, 872:19, 872:20, 872:21	2018 [4] - 927:7, 943:19, 955:3, 955:4	317 [2] - 878:4, 879:20	8 [6] - 847:8, 880:11, 880:12, 880:15, 880:19, 880:21
1,1,1-TCA [1] - 889:1	184 [2] - 900:2, 912:15	2019 [11] - 852:11, 853:1, 854:25, 856:4, 857:25, 871:19, 872:22, 895:23, 897:6, 897:15, 897:19	34th [2] - 848:7, 848:10	8.3 [1] - 936:10
1,500 [2] - 874:19, 929:11	186 [6] - 850:8, 892:19, 892:20, 892:22, 892:23, 898:10	2021 [4] - 847:14, 851:1, 938:12,	350 [1] - 847:24	80 [9] - 867:12, 867:16, 868:6, 868:12, 868:16, 880:7, 880:8, 880:10, 907:3
1.5 [1] - 883:6	190 [4] - 851:19, 856:7, 856:22		39 [1] - 854:16	80-year [1] - 882:12
100 [3] - 876:9, 922:17, 943:18	1920s [1] - 868:1		4 [3] - 847:13, 859:11, 865:19	800 [1] - 878:1
109 [1] - 896:14	1936 [1] - 869:1		4,700 [1] - 862:24	847 [1] - 847:8
11 [1] - 896:15	1940s [2] - 865:12, 868:3		4.1 [1] - 944:6	851 [1] - 849:5
11-DCE [5] - 888:19, 888:23, 889:11, 890:4, 890:15	1942 [1] - 869:1		40 [1] - 968:21	87 [5] - 880:22, 880:24, 881:5, 881:15, 882:23
12 [2] - 887:11, 911:24	1960s [1] - 869:23		400 [1] - 865:21	871 [2] - 850:5
120 [14] - 964:17, 967:3, 967:6, 967:9, 967:14, 967:18, 968:18, 969:10, 975:7, 975:10, 975:12, 975:14,	1967 [1] - 919:12		403 [1] - 855:24	872 [4] - 850:6, 850:7
	1971 [1] - 920:4		42 [3] - 881:10, 881:11, 883:2	888 [2] - 850:4
	1980 [2] - 923:2, 955:3		43 [1] - 884:4	892 [2] - 850:8
	1982 [1] - 923:21		4455 [1] - 847:24	8:30 [4] - 917:2, 917:7, 980:18, 980:23
	1989ish [1] - 887:3		466 [1] - 948:13	9
	1990 [4] - 923:23, 927:18, 929:7, 929:24		466,000 [2] - 943:11, 943:16	9 [2] - 921:19, 924:4
	1995 [2] - 920:6, 922:11		489 [1] - 974:5	90 [1] - 907:3
	1997 [5] - 866:16, 866:18, 866:21, 867:5, 915:3		4:34 [1] - 980:25	90012 [1] - 847:25
			5	90017 [1] - 848:7
			5 [10] - 861:5, 872:24, 872:25, 873:6, 874:10, 874:11, 884:3, 884:10, 907:3	911 [1] - 849:5
			5,000 [1] - 859:11	918 [1] - 849:8

<p>94111 [2] - 848:11, 848:16</p> <p>964 [1] - 849:8</p> <p>97-005 [4] - 877:13, 940:24, 941:7, 941:8</p> <p>98 [1] - 969:22</p> <p>981 [1] - 847:8</p>	<p>957:16, 958:23, 961:16, 961:22, 961:23, 962:2, 962:4, 963:14, 964:16, 967:18, 971:20, 972:13, 975:6, 975:24</p> <p>actions [28] - 921:17, 922:6, 922:16, 923:12, 923:15, 923:16, 924:24, 927:16, 927:18, 927:20, 928:21, 928:22, 928:23, 930:11, 932:24, 933:11, 933:13, 933:15, 934:8, 936:5, 945:19, 946:11, 949:15, 949:17, 953:6, 958:11, 967:21, 976:1</p> <p>activities [7] - 935:18, 945:18, 948:5, 958:2, 958:5, 960:14, 967:23</p> <p>activity [6] - 936:14, 936:19, 945:1, 950:17, 967:8, 967:12</p> <p>Acton [5] - 869:25, 870:2, 915:3, 915:25, 916:5</p> <p>Acton-Mickelson [5] - 869:25, 870:2, 915:3, 915:25, 916:5</p> <p>actual [2] - 860:12, 864:21</p> <p>Actual [1] - 882:8</p> <p>addition [2] - 871:1, 922:4</p> <p>Additional [1] - 954:23</p> <p>additional [7] - 870:25, 891:25, 909:17, 943:9, 960:15, 974:12</p> <p>address [14] - 936:17, 936:23, 937:4, 938:19, 938:20, 941:20, 941:25, 942:6, 944:4, 947:3, 947:4, 949:10, 978:1, 978:21</p> <p>addressing [1] - 947:5</p> <p>adequate [1] - 935:15</p> <p>advice [1] - 962:22</p> <p>advise [1] - 961:20</p> <p>advised [1] - 962:25</p> <p>advising [1] - 926:11</p>	<p>Advisors [2] - 919:4, 919:8</p> <p>AECOM [8] - 852:6, 852:14, 855:1, 855:13, 856:21, 871:18, 873:12, 874:5</p> <p>affect [1] - 965:5</p> <p>affects [1] - 967:14</p> <p>afternoon [2] - 917:11, 917:25</p> <p>afterwards [1] - 952:21</p> <p>agencies [4] - 860:7, 880:14, 945:11, 946:22</p> <p>AGENCY [1] - 847:5</p> <p>agency [51] - 860:24, 912:1, 920:12, 921:25, 923:19, 924:23, 925:11, 927:24, 931:4, 934:13, 935:3, 935:12, 937:3, 942:14, 943:4, 943:11, 944:11, 944:23, 945:8, 947:20, 948:8, 949:1, 951:15, 952:5, 952:13, 952:25, 954:2, 954:9, 955:5, 957:21, 958:1, 961:4, 962:14, 962:23, 962:25, 965:8, 965:14, 965:20, 966:2, 966:11, 970:7, 970:22, 971:7, 971:13, 971:18, 972:2, 972:6, 972:16, 973:1, 977:3</p> <p>Agency [1] - 924:12</p> <p>agency's [2] - 934:17, 957:24</p> <p>agent [2] - 970:17, 971:6</p> <p>ago [2] - 863:5, 972:15</p> <p>agree [9] - 854:24, 866:13, 866:15, 867:11, 888:17, 952:14, 965:21, 966:1, 966:4</p> <p>ahead [6] - 918:4, 939:23, 954:7, 975:5, 976:24, 976:25</p> <p>al [1] - 847:8</p> <p>ALGORRI [4] - 847:23, 981:5,</p>	<p>981:18, 981:19</p> <p>allow [4] - 919:15, 927:19, 951:24, 958:1</p> <p>allowed [1] - 947:22</p> <p>allowing [2] - 883:6, 899:1</p> <p>allows [1] - 929:15</p> <p>almost [2] - 905:7, 959:18</p> <p>alone [1] - 883:4</p> <p>ALSO [1] - 848:18</p> <p>alternate [3] - 974:7, 974:12, 974:19</p> <p>alternates [1] - 974:13</p> <p>alternative [8] - 962:14, 972:1, 972:4, 972:8, 972:20, 973:1, 973:12, 973:16</p> <p>alternatives [10] - 928:8, 928:11, 947:15, 961:24, 962:8, 971:12, 971:23, 974:16, 974:25, 975:25</p> <p>amended [1] - 927:18</p> <p>amount [11] - 914:8, 935:21, 943:11, 948:9, 952:8, 952:10, 955:8, 955:13, 956:19, 965:19, 974:22</p> <p>amounts [1] - 891:10</p> <p>analyses [1] - 854:17</p> <p>analysis [17] - 899:24, 906:14, 906:20, 909:13, 914:13, 914:14, 914:18, 915:6, 920:10, 926:9, 927:1, 935:2, 937:24, 940:16, 941:17, 946:24</p> <p>analytical [1] - 897:13</p> <p>analyzed [4] - 897:22, 897:24, 899:10, 909:14</p> <p>AND [3] - 981:6, 981:9, 981:11</p> <p>Angeles [1] - 848:7</p> <p>ANGELES [3] - 847:15, 847:25, 851:2</p> <p>answer [11] - 866:11, 875:14, 883:22, 885:13, 903:2, 911:10, 932:7, 963:25, 969:19, 971:3, 978:6</p> <p>answered [4] -</p>	<p>908:15, 908:19, 976:19, 976:21</p> <p>answers [1] - 967:1</p> <p>anticipate [4] - 950:11, 950:19, 961:18, 979:10</p> <p>anyway [3] - 953:15, 968:20, 969:25</p> <p>APPEARANCES [1] - 848:1</p> <p>applicable [19] - 931:20, 932:21, 933:1, 933:6, 933:11, 933:14, 933:20, 945:3, 945:9, 946:25, 947:5, 954:5, 956:10, 958:16, 960:8, 968:13, 969:3, 969:6, 976:14</p> <p>application [1] - 968:23</p> <p>applied [2] - 906:20, 929:1</p> <p>applies [4] - 939:5, 941:8, 968:4, 969:9</p> <p>apply [10] - 906:13, 936:5, 941:7, 954:1, 954:3, 955:20, 968:14, 968:20, 968:22, 976:10</p> <p>appreciate [1] - 919:20</p> <p>approach [3] - 927:22, 930:2, 930:5</p> <p>appropriate [7] - 883:20, 906:25, 907:14, 929:15, 939:7, 968:14</p> <p>approximations [1] - 885:7</p> <p>April [1] - 965:25</p> <p>aquifer [12] - 871:21, 872:9, 872:16, 878:25, 880:18, 884:24, 886:20, 887:15, 904:13, 941:11, 942:1</p> <p>aquifers [5] - 861:20, 884:21, 885:1, 895:20, 900:21</p> <p>area [21] - 860:8, 863:11, 863:14, 876:11, 876:18, 878:4, 887:24, 888:4, 888:6, 890:20, 891:22, 898:12, 900:13, 901:11, 905:23, 909:12, 911:20,</p>
A				
<p>Abercrombie [9] - 948:9, 948:17, 969:21, 971:22, 972:16, 972:21, 972:24, 973:8, 977:24</p> <p>ability [4] - 925:16, 930:7, 951:17, 977:3</p> <p>able [8] - 861:2, 861:12, 897:23, 902:5, 917:15, 935:7, 943:3, 943:6</p> <p>ABOVE [1] - 981:11</p> <p>ABOVE-ENTITLED [1] - 981:11</p> <p>absolutely [3] - 892:12, 923:12, 943:23</p> <p>accepted [1] - 865:8</p> <p>access [1] - 974:3</p> <p>according [4] - 870:1, 893:21, 915:14, 926:10</p> <p>account [2] - 899:7, 944:12</p> <p>Account [1] - 974:9</p> <p>accounting [1] - 935:13</p> <p>accurate [2] - 899:8, 973:15</p> <p>achieve [1] - 940:25</p> <p>acres [1] - 879:5</p> <p>acronyms [1] - 923:4</p> <p>acting [2] - 887:17, 887:19</p> <p>action [46] - 928:20, 928:21, 933:22, 934:7, 936:17, 936:23, 937:3, 937:4, 944:3, 944:21, 945:12, 945:13, 945:15, 945:17, 945:18, 945:22, 947:6, 947:14, 948:20, 948:24, 949:2, 949:8, 949:10, 950:8, 950:11, 950:22, 951:9, 953:11, 953:17,</p>				

914:7, 930:14, 933:24, 970:9 areas [5] - 872:23, 883:4, 883:7, 884:7, 925:13 argument [1] - 975:20 arise [1] - 965:14 arose [3] - 964:24, 965:13, 966:11 arrive [2] - 913:4, 913:15 arrow [1] - 900:5 aspect [2] - 933:16, 934:1 aspects [1] - 924:5 assessment [2] - 885:10, 979:13 assignment [3] - 875:12, 924:9, 924:11 assist [2] - 924:23, 924:25 assisted [2] - 865:7, 925:7 associated [8] - 876:4, 910:4, 935:25, 948:9, 950:9, 971:19, 972:9, 973:18 assume [13] - 865:14, 893:8, 902:20, 903:20, 903:23, 961:15, 969:21, 972:15, 972:23, 973:7, 973:15, 974:5, 975:2 assumes [3] - 902:14, 951:21, 973:4 assuming [3] - 879:19, 936:20, 974:20 assumption [1] - 903:5 attention [2] - 920:12, 979:8 August [1] - 969:22 available [9] - 860:7, 860:11, 917:13, 962:20, 971:12, 972:2, 972:16, 978:5, 978:11 availed [2] - 956:20, 957:20 average [7] - 880:22, 880:24, 881:14, 881:21, 881:24, 883:3, 884:21 avoid [1] - 944:18 aware [5] - 859:7, 877:5, 915:16,	969:3, 979:7 B background [3] - 868:14, 914:23, 915:7 backyard [1] - 953:13 banked [2] - 972:17, 972:18 Banking [3] - 974:10, 974:11 banking [1] - 974:12 Barbara [1] - 915:11 barrier [1] - 898:25 based [7] - 878:19, 890:24, 915:8, 946:20, 958:12, 962:19, 968:20 bases [1] - 906:4 basis [5] - 908:3, 951:17, 954:10, 954:15, 969:13 Beaton [1] - 848:20 became [3] - 887:4, 911:23, 929:7 become [3] - 911:22, 923:10, 950:3 becomes [2] - 950:2, 950:16 began [2] - 875:16, 912:3 begin [4] - 851:13, 893:13, 965:21, 966:2 beginning [3] - 944:9, 955:18, 970:15 belief [1] - 960:7 believes [1] - 942:14 below [6] - 879:20, 903:6, 903:14, 942:23, 942:24, 969:24 bench [3] - 917:25, 977:21, 978:2 beneath [4] - 878:6, 878:12, 899:25, 904:16 benefit [2] - 962:6, 962:11 benzene [2] - 871:6 Bermite [4] - 870:2, 912:20, 914:22, 915:14 best [2] - 916:11, 979:22 better [8] - 861:19, 861:23, 884:24, 893:1, 895:25, 908:7, 935:12, 940:1	between [7] - 873:8, 874:9, 874:22, 880:7, 910:19, 928:25 beyond [8] - 873:3, 914:19, 915:18, 916:1, 938:16, 951:21, 951:22, 962:23 bible [1] - 923:14 Big [1] - 974:8 big [2] - 913:20, 956:9 bigger [1] - 901:15 billion [5] - 856:25, 859:11, 859:13, 873:6, 874:12 binders [1] - 980:7 bit [19] - 855:25, 877:24, 882:19, 882:20, 884:8, 910:1, 910:3, 915:21, 916:16, 919:19, 926:14, 929:25, 936:1, 937:17, 937:20, 939:18, 940:2, 954:4, 966:22 black [2] - 893:12, 893:16 blending [4] - 937:16, 948:14, 953:22, 953:24 blends [1] - 956:3 blip [1] - 863:10 block [2] - 926:2, 926:5 blow [2] - 890:9, 894:18 blue [6] - 901:2, 901:5, 904:9, 904:20, 905:11, 955:11 Blum [17] - 849:5, 849:8, 851:13, 855:25, 882:19, 896:6, 905:15, 913:16, 916:17, 916:22, 921:11, 964:6, 968:7, 971:15, 973:15, 978:4, 979:3 BLUM [63] - 848:13, 848:14, 851:18, 856:1, 862:18, 862:22, 868:19, 870:18, 871:18, 872:1, 872:8, 872:20, 875:19, 882:21, 883:25, 888:10, 888:15, 890:9, 890:11,	890:13, 892:19, 892:23, 894:17, 895:3, 896:2, 896:7, 896:11, 896:14, 896:17, 897:1, 903:13, 905:16, 905:21, 908:2, 908:13, 908:17, 908:21, 911:2, 915:18, 916:1, 916:23, 919:14, 921:2, 921:12, 938:15, 938:21, 939:15, 951:20, 956:12, 956:22, 957:10, 959:1, 960:19, 964:8, 964:12, 971:5, 973:7, 973:20, 976:24, 977:7, 978:6, 978:18, 980:4 blum [1] - 916:15 BLUMENFELD [1] - 847:3 Blumenfeld [3] - 931:19, 958:17, 969:8 Board [2] - 937:18, 946:23 body [1] - 932:3 border [4] - 851:24, 852:3, 852:5, 898:14 bottled [2] - 950:5, 951:2 bottom [6] - 881:22, 890:6, 894:15, 895:5, 953:19, 961:1 bought [1] - 952:22 boundary [3] - 883:7, 900:6, 900:11 Bowl [11] - 869:19, 884:1, 884:2, 884:7, 884:9, 890:20, 893:17, 893:22, 898:12 Bravo [1] - 974:11 break [7] - 917:11, 917:19, 921:15, 933:3, 953:20, 979:24 brief [2] - 951:25, 977:25 briefing [1] - 938:19 briefly [7] - 880:12, 919:10, 920:13, 921:14, 922:21, 934:3, 946:13 bring [2] - 950:15, 962:17 broader [1] - 962:7	broadly [1] - 928:16 brought [1] - 916:15 Buena [1] - 974:9 Building [1] - 878:4 building [1] - 943:4 built [2] - 887:10, 951:16 bulk [4] - 880:21, 881:8, 884:25, 980:13 bullet [2] - 929:23, 950:25 burn [1] - 898:12 Burn [4] - 884:13, 885:5, 893:19, 893:22 business [2] - 864:22, 865:1 buy [2] - 943:12, 944:12 buying [4] - 946:8, 952:11, 954:2, 974:17 BY [43] - 848:4, 848:5, 848:5, 848:6, 848:9, 848:14, 848:14, 848:15, 851:16, 851:18, 856:1, 862:22, 870:18, 871:18, 872:20, 875:19, 883:25, 888:15, 892:23, 895:3, 896:14, 897:1, 903:13, 908:2, 908:21, 911:2, 911:9, 915:22, 916:4, 918:20, 918:22, 921:14, 938:22, 940:6, 952:18, 956:15, 956:24, 957:14, 964:12, 971:5, 973:7, 973:20, 976:24 Byron [1] - 908:17 BYRON [1] - 848:4 C c.v [2] - 919:15, 920:17 CA [15] - 926:22, 926:24, 927:4, 938:17, 941:16, 941:19, 941:24, 942:2, 942:7, 945:14, 947:10, 947:12, 963:10, 963:11 calculated [2] -
---	---	--	--	--

<p>880:16, 884:15 calculation [1] - 885:3 CALIFORNIA [5] - 847:2, 847:15, 847:25, 851:2, 981:7 California [5] - 848:7, 848:10, 848:11, 848:16, 921:20 CALLED [2] - 851:16, 918:20 cannot [2] - 902:20, 939:15 capable [2] - 897:14, 898:18 capacity [2] - 966:12, 966:16 capital [2] - 926:24, 957:4 capture [30] - 876:12, 876:13, 876:14, 876:17, 876:20, 876:22, 876:24, 877:9, 877:10, 877:15, 877:17, 888:6, 888:7, 888:9, 892:24, 893:3, 893:6, 893:11, 898:18, 899:4, 899:7, 899:12, 899:13, 901:8, 901:9, 901:10, 913:24 captured [2] - 888:3, 888:4 captures [2] - 888:4, 888:5 capturing [1] - 898:19 care [2] - 968:3, 977:15 carved [1] - 929:11 case [29] - 865:2, 866:2, 869:6, 871:11, 881:18, 881:25, 882:5, 882:6, 885:9, 916:12, 917:4, 924:20, 925:5, 931:19, 935:24, 936:13, 945:11, 946:22, 948:8, 948:22, 949:10, 950:9, 951:8, 951:25, 955:21, 956:10, 968:4, 976:11, 978:11 CASE [1] - 847:6 cases [4] - 857:25, 892:2, 945:7, 945:16 casings [1] - 869:14 catch [1] - 925:3</p>	<p>categories [10] - 936:3, 938:10, 938:13, 944:24, 945:1, 945:25, 946:14, 947:23, 947:25, 948:18 category [3] - 936:4, 942:21, 944:5 causing [2] - 902:18, 902:19 center [1] - 904:2 centerline [2] - 861:17, 904:4 CENTRAL [2] - 847:2, 981:7 CERCLA [1] - 923:3 certain [1] - 879:24 certainly [4] - 861:20, 878:7, 902:23, 957:6 CERTIFICATE [1] - 981:1 CERTIFY [1] - 981:7 cetera [1] - 958:9 CH2M [1] - 909:13 challenge [1] - 939:19 challenged [2] - 980:5, 980:8 chance [1] - 968:8 CHANDALAR [1] - 848:9 change [6] - 916:18, 951:17, 952:8, 953:24, 962:16, 975:11 changed [2] - 912:1, 953:4 changeover [1] - 869:23 changes [3] - 911:13, 966:19, 966:23 changing [2] - 967:11, 968:17 characteristics [1] - 949:19 characterization [1] - 892:10 characterized [1] - 928:9 chart [7] - 936:10, 936:18, 954:18, 954:24, 955:2, 955:7, 956:5 charts [3] - 913:8, 921:9, 980:16 check [2] - 865:15, 915:9 checking [1] - 897:10 checklist [1] - 930:10 chemical [1] - 862:17 chemicals [1] - 944:1</p>	<p>cherry [1] - 882:17 cherry-picking [1] - 882:17 Chief [1] - 945:8 chlorite [1] - 970:6 choice [1] - 961:23 chosen [1] - 967:5 circle [7] - 873:21, 874:4, 876:16, 888:8, 893:13, 894:23, 895:3 circles [1] - 876:15 circumstances [5] - 931:23, 932:19, 932:23, 933:21, 976:12 citation [1] - 959:12 cite [2] - 971:5, 977:25 cited [5] - 853:11, 854:2, 855:4, 855:8, 855:22 Cited [2] - 854:25, 855:13 City [1] - 919:12 claim [4] - 925:16, 925:19, 926:18, 934:22 claimed [1] - 935:7 claiming [2] - 924:13, 935:14 claims [2] - 934:20, 934:21 Clara [1] - 924:12 CLARITA [1] - 847:5 classified [1] - 946:10 clean [7] - 922:1, 922:9, 923:14, 927:15, 928:6, 929:6, 949:11 clean-up [1] - 922:1 clean-ups [1] - 923:14 cleaning [1] - 927:23 cleanup [4] - 913:18, 932:17, 932:19, 935:18 cleanups [6] - 928:12, 929:2, 929:14, 929:20, 929:21, 930:16 clear [8] - 860:14, 880:15, 929:7, 929:19, 931:11, 946:4, 948:21, 954:19 clearer [1] - 867:21 clearly [1] - 934:14 CLERK [2] - 918:6, 918:13 clients [1] - 933:8 clock [1] - 919:21</p>	<p>close [4] - 875:3, 899:14, 949:24, 951:25 closer [2] - 910:21, 940:2 closest [1] - 911:3 closing [1] - 977:25 clusters [3] - 875:2, 875:5, 877:18 CODE [1] - 981:8 collected [3] - 880:13, 880:14, 884:23 color [1] - 955:11 column [1] - 935:25 combine [1] - 885:1 combined [2] - 865:23 comfortable [1] - 855:19 coming [8] - 876:17, 888:2, 888:3, 920:17, 941:24, 954:12, 971:15 commensurate [1] - 914:8 comment [4] - 967:4, 974:17, 975:15, 975:20 comments [3] - 931:3, 958:2, 958:5 communicate [3] - 949:20, 954:15, 960:17 communicated [1] - 953:1 communicates [1] - 956:2 communicating [1] - 951:4 communication [1] - 961:7 communities [1] - 922:2 community [11] - 922:10, 949:21, 950:3, 950:17, 950:18, 951:1, 952:12, 952:13, 953:12, 954:15, 956:17 company [6] - 853:24, 864:18, 864:20, 864:24, 885:22, 919:4 compare [2] - 875:16, 914:5 completed [1] - 909:19 completely [1] - 963:20 complex [1] - 941:13</p>	<p>compliance [20] - 929:22, 929:25, 930:15, 931:9, 931:12, 931:13, 931:15, 932:11, 932:12, 932:16, 932:25, 933:8, 933:9, 933:20, 934:1, 934:5, 944:25, 948:1, 959:25, 961:2 complicated [1] - 937:17 complications [2] - 964:1, 972:9 comply [4] - 928:1, 938:7, 945:10, 961:5 complying [1] - 937:25 component [1] - 937:3 components [1] - 937:6 comports [1] - 978:14 compound [1] - 903:9 comprehensive [1] - 956:5 conceivably [1] - 929:5 concentration [12] - 852:7, 856:14, 861:16, 862:16, 863:6, 863:23, 864:3, 871:19, 872:10, 872:23, 874:9, 890:7 concentrations [24] - 856:18, 857:14, 859:6, 859:8, 859:9, 861:6, 861:12, 861:21, 862:13, 862:14, 863:13, 863:20, 864:12, 867:8, 870:24, 872:24, 873:2, 874:11, 889:14, 905:4, 906:12, 969:13, 969:24, 971:8 concern [3] - 875:8, 934:6, 944:10 concerned [2] - 970:8, 970:10 concerning [1] - 960:22 concerns [1] - 949:22 concise [1] - 922:11 conclude [3] - 880:6, 890:25, 909:4 concluded [2] - 917:1, 980:25</p>
--	---	--	--	---

<p>conclusion [13] - 880:9, 906:4, 906:22, 907:12, 907:18, 908:4, 913:12, 947:24, 956:12, 958:24, 959:2, 961:2, 961:17</p> <p>conclusions [4] - 865:8, 865:11, 916:18, 958:11</p> <p>condition [3] - 900:19, 939:9, 939:13</p> <p>conditions [1] - 941:12</p> <p>conduct [1] - 923:14</p> <p>conducted [1] - 924:24</p> <p>conducting [1] - 928:1</p> <p>cone [3] - 914:3, 914:4, 914:5</p> <p>CONFERENCE [1] - 981:12</p> <p>CONFORMANCE [1] - 981:12</p> <p>Congress [1] - 923:2</p> <p>Conservation [1] - 974:8</p> <p>conservative [4] - 881:18, 881:21, 881:24, 882:6</p> <p>consider [2] - 853:23, 902:4</p> <p>considered [10] - 852:25, 853:2, 853:4, 853:15, 853:22, 956:16, 972:20, 973:2, 973:11</p> <p>consistency [5] - 922:16, 927:24, 932:20, 938:8, 948:4</p> <p>Consistent [1] - 938:11</p> <p>consistent [6] - 924:14, 925:1, 936:19, 945:19, 953:6, 972:12</p> <p>consists [1] - 878:12</p> <p>constructed [1] - 927:17</p> <p>consult [1] - 925:14</p> <p>consultant [2] - 926:12, 961:20</p> <p>Consultants [1] - 877:8</p> <p>consultants [1] - 925:22</p> <p>consulting [4] - 920:9, 922:12, 924:23, 925:11</p>	<p>Consulting [1] - 864:22</p> <p>consumers [2] - 944:23, 948:25</p> <p>consuming [6] - 949:12, 953:2, 954:10, 955:6, 955:12, 957:21</p> <p>contain [4] - 898:12, 898:13, 913:24</p> <p>contained [2] - 854:18, 873:9</p> <p>containing [1] - 911:19</p> <p>containment [3] - 887:18, 887:19, 887:21</p> <p>contaminant [4] - 884:25, 897:13, 913:22, 970:17</p> <p>contaminants [13] - 861:11, 870:20, 870:23, 871:4, 883:5, 883:6, 884:18, 898:11, 899:25, 911:16, 912:3, 912:25, 914:15</p> <p>contaminated [9] - 887:4, 887:8, 910:21, 911:3, 911:23, 949:24, 950:2, 950:4, 970:6</p> <p>contamination [18] - 859:17, 861:20, 870:19, 872:23, 892:3, 892:11, 893:21, 900:13, 902:19, 902:20, 908:4, 912:8, 913:24, 941:20, 950:15, 950:16, 970:20, 977:4</p> <p>Contamination [1] - 882:11</p> <p>context [4] - 928:2, 928:4, 955:18, 960:22</p> <p>contextual [1] - 956:6</p> <p>contingency [3] - 922:23, 925:1, 930:25</p> <p>continue [5] - 912:5, 917:4, 943:12, 946:9, 948:25</p> <p>continuing [3] - 911:16, 913:14, 913:23</p> <p>continuity [1] - 919:18</p> <p>contour [13] - 856:14,</p>	<p>857:10, 857:15, 857:22, 858:8, 872:21, 873:5, 873:6, 873:11, 873:15, 873:19, 873:24</p> <p>contours [5] - 856:25, 857:19, 858:3, 871:24, 872:13</p> <p>contract [2] - 856:21, 965:12</p> <p>contracts [2] - 972:24, 973:8</p> <p>contribute [1] - 923:17</p> <p>contributed [2] - 891:19, 924:6</p> <p>control [3] - 858:15, 858:18, 874:7</p> <p>Control [2] - 937:18, 946:23</p> <p>controlling [3] - 881:19, 885:8, 885:12</p> <p>controversy [1] - 948:22</p> <p>conversant [1] - 963:20</p> <p>conversation [2] - 971:24, 971:25</p> <p>Conveyed [1] - 954:23</p> <p>conveyed [1] - 955:25</p> <p>corner [2] - 873:8, 890:6</p> <p>CORPORATION [1] - 847:8</p> <p>CORRECT [1] - 981:9</p> <p>correct [131] - 852:23, 853:2, 853:17, 856:20, 857:10, 859:22, 859:24, 860:5, 860:16, 861:7, 861:8, 862:9, 863:16, 864:9, 865:3, 865:4, 865:5, 865:13, 865:17, 865:18, 865:20, 866:21, 866:25, 868:12, 868:17, 871:19, 871:21, 871:22, 871:23, 871:24, 871:25, 872:11, 872:12, 873:3, 873:9, 873:10, 873:15, 873:19, 873:20, 877:6, 878:1, 878:10, 878:15, 878:19, 879:4, 879:21, 880:20,</p>	<p>880:22, 881:6, 881:15, 883:9, 884:13, 884:14, 885:15, 885:23, 885:24, 886:20, 887:6, 887:10, 887:15, 887:16, 887:18, 888:15, 888:19, 889:9, 889:22, 889:25, 890:7, 890:8, 890:19, 891:4, 891:15, 891:16, 893:6, 893:9, 893:14, 893:15, 893:17, 893:18, 893:19, 893:20, 893:24, 894:3, 894:4, 894:5, 894:6, 894:12, 894:13, 894:15, 894:16, 895:8, 895:11, 895:23, 897:6, 897:8, 897:10, 897:16, 898:8, 900:3, 900:4, 900:8, 900:9, 900:11, 900:23, 901:3, 901:5, 901:18, 901:19, 901:20, 901:21, 901:25, 902:12, 902:13, 903:8, 903:16, 903:21, 906:3, 906:23, 908:2, 908:6, 908:8, 908:22, 909:4, 910:22, 910:24, 911:2, 912:25, 914:20, 916:10, 965:15, 976:18</p> <p>corroborating [1] - 902:23</p> <p>cost [29] - 925:5, 925:12, 925:13, 925:19, 926:9, 926:18, 927:1, 930:10, 930:16, 931:13, 934:1, 934:8, 934:17, 934:21, 935:24, 936:15, 936:16, 936:20, 936:24, 937:23, 941:17, 944:3, 945:21, 948:17, 961:25, 967:5, 974:18, 975:16</p> <p>Costs [1] - 938:12</p> <p>costs [65] - 924:12, 924:13, 925:2,</p>	<p>925:20, 929:15, 930:7, 934:16, 934:23, 934:25, 935:1, 935:3, 935:5, 935:6, 935:7, 935:9, 935:10, 935:11, 935:14, 935:16, 935:17, 935:18, 935:25, 936:3, 936:8, 936:9, 937:7, 937:10, 937:11, 937:16, 937:21, 938:16, 938:23, 939:1, 939:6, 940:8, 940:12, 940:14, 940:17, 941:18, 942:2, 942:3, 942:17, 943:10, 943:16, 943:21, 944:15, 944:16, 944:25, 945:5, 945:25, 946:3, 946:7, 948:12, 948:15, 957:4, 957:5, 958:15, 958:25, 961:3, 962:8, 973:18</p> <p>counsel [5] - 896:19, 896:23, 921:5, 953:9, 980:12</p> <p>COUNSEL [1] - 848:1</p> <p>counseling [1] - 933:8</p> <p>counties [1] - 973:9</p> <p>counting [2] - 865:6, 943:17</p> <p>country [5] - 923:6, 927:24, 929:10, 929:11, 929:12</p> <p>County [2] - 972:25</p> <p>couple [4] - 859:19, 898:5, 954:4, 976:7</p> <p>course [10] - 854:1, 858:9, 870:10, 873:22, 874:6, 882:24, 887:22, 899:9, 900:16, 967:23</p> <p>COURT [84] - 847:1, 847:24, 851:7, 851:13, 855:23, 862:17, 868:18, 870:15, 872:5, 875:13, 882:19, 883:17, 883:22, 895:1, 896:4, 896:9, 896:13, 896:19, 903:11, 905:15, 905:20, 908:1, 908:19, 910:25, 911:7, 915:20,</p>
---	--	---	---	---

<p>916:2, 916:22, 916:24, 917:10, 917:18, 917:23, 918:4, 918:17, 919:17, 919:21, 920:19, 920:24, 921:3, 921:6, 921:10, 921:13, 925:10, 926:3, 926:19, 938:18, 939:16, 940:2, 951:22, 956:14, 956:23, 957:11, 959:3, 959:11, 959:16, 960:21, 961:13, 962:5, 962:19, 962:25, 963:16, 964:2, 964:6, 964:10, 968:7, 970:18, 970:25, 973:5, 973:14, 976:21, 977:8, 977:11, 977:17, 978:3, 978:16, 978:19, 979:9, 979:13, 980:2, 980:5, 980:17, 981:6, 981:19</p> <p>Court [12] - 855:23, 896:8, 918:9, 919:10, 919:15, 934:15, 938:20, 954:21, 956:13, 959:2, 976:17, 978:20</p> <p>court [3] - 851:6, 917:9, 926:4</p> <p>Court's [2] - 961:17, 979:7</p> <p>courtroom [3] - 896:18, 896:21, 896:24</p> <p>covariance [12] - 906:6, 906:8, 906:10, 907:3, 907:4, 907:6, 907:11, 907:13, 907:17, 907:19, 908:5, 912:22</p> <p>covariant [5] - 912:18, 912:19, 912:23, 913:11</p> <p>covaried [1] - 906:21</p> <p>cover [1] - 852:8</p> <p>covered [1] - 852:5</p> <p>created [1] - 853:24</p> <p>creation [1] - 967:21</p> <p>criteria [1] - 938:13</p> <p>critical [29] - 921:17,</p>	<p>922:6, 928:23, 944:3, 944:21, 945:13, 945:17, 945:21, 946:11, 947:13, 949:1, 949:8, 949:15, 949:17, 950:8, 950:11, 950:22, 951:9, 953:6, 957:16, 958:10, 961:16, 961:23, 962:2, 962:22, 963:13, 971:20, 972:12</p> <p>Cross [2] - 849:5, 849:8</p> <p>cross [5] - 851:14, 904:12, 910:1, 964:7, 979:20</p> <p>CROSS [2] - 851:17, 964:11</p> <p>Cross-examination [2] - 849:5, 849:8</p> <p>cross-examination [3] - 851:14, 964:7, 979:20</p> <p>CROSS- EXAMINATION [2] - 851:17, 964:11</p> <p>cross-gradient [1] - 910:1</p> <p>cross-sections [1] - 904:12</p> <p>CRR [2] - 847:23, 981:19</p> <p>crushed [1] - 869:14</p> <p>Cruz [1] - 917:15</p> <p>CSR [2] - 847:23, 981:19</p> <p>customers [1] - 946:9</p> <p>cut [1] - 935:20</p> <p>CV [1] - 847:7</p>	<p>899:11, 899:16, 899:18, 902:4, 906:11</p> <p>database [1] - 871:13</p> <p>databases [1] - 855:16</p> <p>date [3] - 964:23, 964:25, 966:2</p> <p>DATED [1] - 981:15</p> <p>dates [2] - 868:1, 896:1</p> <p>David [2] - 864:20, 864:21</p> <p>DAY [2] - 847:13, 981:15</p> <p>days [13] - 964:17, 967:3, 967:9, 967:14, 967:18, 968:18, 969:10, 972:15, 975:7, 975:10, 975:14, 975:23, 976:15</p> <p>DCA [5] - 914:21, 915:22, 915:24, 916:6, 916:8</p> <p>DCE [9] - 889:23, 890:7, 890:18, 890:19, 891:1, 891:10, 891:12, 892:14, 902:20</p> <p>DDW [14] - 877:10, 944:1, 944:11, 945:11, 946:23, 947:1, 952:21, 963:6, 969:22, 970:13, 970:23, 970:24, 971:6, 977:1</p> <p>deal [6] - 923:5, 941:3, 942:14, 942:18, 950:16, 963:6</p> <p>dealing [5] - 917:25, 921:21, 926:13, 927:4, 953:12</p> <p>decade [2] - 905:7, 905:10</p> <p>decades [1] - 905:9</p> <p>December [1] - 965:4</p> <p>decided [1] - 899:6</p> <p>decision [4] - 948:19, 958:17, 963:5, 976:3</p> <p>decisions [4] - 921:24, 922:1, 922:8, 931:4</p> <p>deep [2] - 877:22, 885:10</p> <p>deeper [1] - 878:2</p> <p>defeat [1] - 958:22</p> <p>defeated [1] - 934:8</p> <p>DEFENDANTS [2] - 847:9, 848:12</p> <p>defense [2] - 868:4,</p>	<p>980:3</p> <p>definitely [1] - 960:12</p> <p>definition [1] - 936:14</p> <p>definitions [1] - 922:20</p> <p>degradation [2] - 889:1, 889:2</p> <p>degreasing [1] - 868:2</p> <p>degree [1] - 919:11</p> <p>delineated [2] - 856:23, 857:18</p> <p>delivered [4] - 970:11, 972:18, 972:20, 973:1</p> <p>delivery [1] - 973:9</p> <p>Delta [1] - 974:8</p> <p>demonstratives [1] - 921:4</p> <p>depicts [1] - 950:14</p> <p>deposition [15] - 863:19, 864:7, 864:8, 864:11, 877:4, 879:10, 879:17, 889:10, 889:16, 896:2, 897:3, 906:4, 908:3, 908:21, 938:16</p> <p>depression [4] - 887:24, 914:3, 914:4, 914:5</p> <p>describe [2] - 919:9, 956:24</p> <p>described [9] - 854:17, 854:19, 854:20, 900:3, 903:6, 909:12, 916:18, 958:2, 958:7</p> <p>describing [1] - 957:2</p> <p>DESCRIPTION [1] - 850:3</p> <p>design [2] - 942:11, 942:17</p> <p>designated [1] - 941:10</p> <p>designation [1] - 941:12</p> <p>designed [1] - 962:15</p> <p>despite [1] - 935:11</p> <p>detail [4] - 898:19, 899:21, 930:20, 947:24</p> <p>detailed [5] - 870:23, 885:10, 909:11, 930:3, 935:23</p> <p>details [2] - 924:9, 928:24</p> <p>detect [14] - 858:10, 858:12, 897:5, 897:11, 897:12, 939:14, 939:17,</p>	<p>940:21, 941:1, 941:14, 947:2, 947:11, 963:6, 977:5</p> <p>detected [12] - 857:20, 858:4, 858:6, 867:25, 889:6, 890:4, 890:15, 890:19, 895:21, 904:15, 909:21, 910:15</p> <p>detection [2] - 863:14, 910:16</p> <p>detections [2] - 897:19, 913:12</p> <p>determination [11] - 889:13, 890:1, 891:7, 907:1, 907:2, 933:13, 934:25, 936:7, 969:6, 969:7, 969:8</p> <p>determine [12] - 861:14, 875:20, 885:3, 891:5, 899:24, 902:5, 906:9, 906:21, 907:4, 935:16, 936:3, 937:9</p> <p>determined [5] - 879:11, 909:15, 909:19, 935:5, 945:19</p> <p>determining [1] - 973:11</p> <p>detonators [1] - 869:14</p> <p>developed [5] - 898:24, 923:24, 924:2, 929:8, 934:19</p> <p>developing [1] - 924:1</p> <p>development [1] - 924:6</p> <p>deviation [3] - 958:20, 959:6, 959:25</p> <p>difference [4] - 908:9, 910:7, 910:18, 928:24</p> <p>different [28] - 852:4, 854:21, 856:9, 861:6, 872:9, 872:16, 876:19, 876:21, 878:19, 884:8, 896:6, 897:20, 899:12, 899:13, 916:16, 922:17, 929:20, 929:23, 930:15, 945:15, 946:11, 949:17, 951:8, 956:3, 960:5, 963:1, 963:12</p>
	<p>D</p> <p>D.C [1] - 923:25</p> <p>damages [2] - 979:1, 979:6</p> <p>danger [1] - 863:7</p> <p>DANIEL [1] - 848:15</p> <p>darker [1] - 955:11</p> <p>dashed [1] - 856:17</p> <p>data [21] - 852:13, 854:17, 854:18, 857:7, 857:23, 859:12, 874:22, 880:13, 880:17, 880:25, 884:23, 885:2, 892:7, 892:16, 895:24,</p>			

<p>differently [1] - 946:1</p> <p>difficult [2] - 889:15, 935:12</p> <p>Direct [1] - 849:8</p> <p>DIRECT [1] - 918:21</p> <p>direct [2] - 851:21, 859:10</p> <p>directing [2] - 921:22, 923:13</p> <p>direction [4] - 873:11, 906:5, 909:7, 922:5</p> <p>directions [3] - 897:21, 899:2, 899:25</p> <p>directly [4] - 869:24, 870:3, 899:11, 931:8</p> <p>director [1] - 924:3</p> <p>directors [1] - 923:25</p> <p>disclosures [2] - 958:8, 960:23</p> <p>discretion [1] - 855:24</p> <p>discuss [3] - 971:22, 972:5, 972:6</p> <p>discussed [3] - 913:16, 924:5, 974:13</p> <p>discussion [5] - 882:18, 882:22, 945:22, 959:5, 974:7</p> <p>dispersed [1] - 906:24</p> <p>display [1] - 912:15</p> <p>disposal [2] - 869:11, 923:5</p> <p>disposed [4] - 867:11, 867:14, 868:5, 868:11</p> <p>disputed [2] - 979:1, 979:5</p> <p>disruptive [2] - 949:22, 967:22</p> <p>Distances [1] - 884:9</p> <p>distances [1] - 884:12</p> <p>distinction [2] - 930:19, 930:21</p> <p>distracted [1] - 873:16</p> <p>distribute [1] - 944:22</p> <p>distribution [5] - 856:3, 906:13, 943:14, 944:19, 952:6</p> <p>DISTRICT [5] - 847:1, 847:2, 847:3, 981:6, 981:7</p> <p>dive [1] - 885:10</p> <p>divided [1] - 928:17</p> <p>DIVISION [1] - 847:2</p> <p>Division [3] - 938:1, 940:22, 941:9</p> <p>division [2] - 921:22, 923:13</p>	<p>DIW [6] - 875:3, 875:5, 875:8, 875:10, 876:4, 877:10</p> <p>DIW-1 [1] - 875:15</p> <p>DO [1] - 981:7</p> <p>doctor [1] - 856:1</p> <p>document [7] - 942:8, 947:14, 947:18, 963:10, 971:6, 971:10, 974:2</p> <p>documentation [6] - 860:6, 935:15, 935:24, 945:5, 946:15, 954:10</p> <p>documented [1] - 867:24</p> <p>documents [9] - 852:25, 853:4, 853:15, 915:9, 946:21, 954:11, 959:9, 960:5, 973:20</p> <p>dollars [1] - 935:14</p> <p>done [22] - 852:18, 852:21, 856:21, 857:9, 866:10, 868:25, 870:13, 876:20, 879:9, 884:19, 906:15, 920:22, 926:10, 940:25, 941:20, 942:12, 950:24, 952:9, 959:18, 960:3, 963:18, 976:7</p> <p>door [1] - 916:2</p> <p>dot [1] - 901:15</p> <p>dots [2] - 890:14, 894:20</p> <p>dotted [2] - 900:25, 904:21</p> <p>down [25] - 856:25, 860:19, 861:13, 876:18, 882:7, 887:11, 901:20, 904:12, 916:25, 925:2, 933:3, 933:4, 935:25, 938:4, 939:14, 939:16, 941:16, 942:23, 942:24, 953:20, 969:25, 970:10, 970:22, 971:7, 977:2</p> <p>downgradient [12] - 888:8, 897:23, 909:25, 910:2, 910:6, 910:8, 910:10, 910:20, 911:17, 911:20, 912:9, 912:13</p> <p>Dr [10] - 865:7, 979:6, 979:11, 979:12,</p>	<p>979:14, 979:19, 979:23, 979:24, 980:6, 980:19</p> <p>draw [10] - 857:7, 863:11, 873:10, 894:23, 895:3, 900:9, 904:7, 906:22, 907:17, 919:19</p> <p>drawing [5] - 873:23, 874:2, 894:9, 904:3, 942:1</p> <p>drawn [4] - 858:3, 893:22, 900:5, 904:8</p> <p>drew [6] - 874:1, 874:3, 874:5, 900:8, 904:20, 905:4</p> <p>drink [2] - 944:23, 946:10</p> <p>Drinking [3] - 938:1, 940:22, 941:9</p> <p>drinking [4] - 943:3, 948:25, 950:1, 952:6</p> <p>drought [1] - 963:17</p> <p>drums [3] - 869:14, 949:25, 953:12</p> <p>ducks [1] - 926:17</p> <p>Durant [1] - 877:1</p> <p>during [3] - 851:21, 920:3, 922:2</p> <p>DW [1] - 875:1</p> <p>DWO [1] - 877:18</p> <p>dynamic [1] - 911:25</p> <p>dynamics [1] - 911:13</p>	<p>effect [1] - 860:13</p> <p>effective [7] - 925:5, 925:16, 926:18, 958:23, 967:5, 974:18, 975:16</p> <p>effort [1] - 923:5</p> <p>efforts [2] - 958:7, 958:9</p> <p>eight [2] - 876:19, 945:25</p> <p>either [6] - 858:12, 904:15, 908:25, 928:15, 928:21, 937:13</p> <p>elaborate [3] - 940:23, 940:24, 967:10</p> <p>elements [2] - 932:15, 938:8</p> <p>elevation [2] - 854:18, 857:19</p> <p>emergency [7] - 922:5, 965:13, 965:15, 966:7, 966:17, 976:1</p> <p>employ [2] - 928:10, 938:5</p> <p>employees [2] - 870:2, 915:14</p> <p>employment [1] - 919:10</p> <p>encompass [2] - 893:16, 893:19</p> <p>encourage [2] - 929:14, 934:7</p> <p>encouragement [1] - 935:11</p> <p>encouraging [1] - 930:6</p> <p>end [12] - 864:7, 880:21, 880:23, 882:10, 885:2, 894:11, 930:7, 939:20, 939:21, 971:2, 977:18, 979:16</p> <p>ended [1] - 924:19</p> <p>ends [1] - 955:3</p> <p>engineer [1] - 877:7</p> <p>engineering [6] - 919:11, 926:9, 926:21, 927:1, 937:23, 941:17</p> <p>Engineering [1] - 864:19</p> <p>Engineers [3] - 864:22, 864:23, 864:24</p> <p>entered [1] - 919:16</p> <p>entire [2] - 911:25, 947:20</p>	<p>entitled [1] - 938:11</p> <p>ENTITLED [1] - 981:11</p> <p>entity [1] - 930:16</p> <p>entry [1] - 855:16</p> <p>environment [1] - 937:5</p> <p>environmental [1] - 877:7</p> <p>EPA [13] - 919:25, 920:3, 921:18, 922:11, 922:14, 923:11, 923:24, 927:18, 929:1, 929:8, 929:11, 930:4, 934:11</p> <p>equating [1] - 966:6</p> <p>equation [1] - 966:9</p> <p>equipment [1] - 942:13</p> <p>ERIC [1] - 848:15</p> <p>Eric [1] - 848:20</p> <p>essential [1] - 941:3</p> <p>essentially [2] - 929:4, 962:22</p> <p>established [2] - 866:22, 929:24</p> <p>establishment [1] - 881:18</p> <p>estimate [1] - 885:8</p> <p>Estimated [1] - 856:13</p> <p>estimated [1] - 881:14</p> <p>estimates [6] - 879:22, 879:25, 929:10, 945:7, 948:11, 948:17</p> <p>estimations [1] - 885:7</p> <p>et [2] - 847:8, 958:9</p> <p>ethyl [1] - 871:6</p> <p>evaluate [10] - 924:12, 932:18, 937:24, 938:9, 940:25, 945:16, 947:7, 948:4, 974:22, 975:25</p> <p>evaluated [8] - 933:17, 934:16, 938:12, 940:10, 944:25, 945:16, 947:11, 947:15</p> <p>evaluating [6] - 931:12, 932:23, 933:8, 934:20, 937:22, 961:24</p> <p>evaluation [7] - 926:9, 926:22, 927:1, 934:24, 937:23, 941:17, 941:19</p> <p>evaluations [3] - 922:15, 974:24,</p>
E				
<p>early [1] - 942:12</p> <p>easier [2] - 939:20, 962:10</p> <p>easy [1] - 960:2</p> <p>edge [1] - 857:13</p> <p>EDLIN [1] - 848:13</p> <p>education [1] - 919:9</p> <p>EE [15] - 926:22, 926:24, 927:4, 938:17, 941:16, 941:19, 941:24, 942:2, 942:7, 945:14, 947:10, 947:12, 963:10, 963:11</p> <p>EE-CA [15] - 926:22, 926:24, 927:4, 938:17, 941:16, 941:19, 941:24, 942:2, 942:7, 945:14, 947:10, 947:12, 963:10, 963:11</p>				

<p>976:5 evening [1] - 917:6 event [3] - 953:5, 979:4, 980:17 eventually [3] - 926:12, 947:18, 959:23 EVIDENCE [1] - 850:2 evidence [18] - 869:3, 871:17, 872:4, 872:19, 888:11, 888:14, 890:25, 892:20, 892:22, 902:24, 907:23, 909:8, 951:21, 969:23, 973:4, 974:5, 977:20, 977:22 exact [2] - 867:13, 964:25 exacting [1] - 913:1 exactly [7] - 855:2, 855:20, 884:6, 905:3, 910:2, 956:18, 969:19 examination [10] - 849:5, 849:5, 849:8, 849:8, 851:14, 851:22, 859:10, 964:7, 978:23, 979:20 EXAMINATION [4] - 851:17, 911:8, 918:21, 964:11 example [9] - 861:18, 862:11, 875:16, 898:20, 909:13, 913:13, 925:20, 935:10, 954:13 examples [1] - 949:14 exceed [1] - 970:8 exceeded [1] - 970:12 exceeding [1] - 970:23 exception [3] - 968:3, 977:22, 979:5 exclusively [2] - 940:12, 940:14 excuse [1] - 970:11 excused [2] - 916:24, 977:11 exercise [1] - 855:23 Exhibit [22] - 851:19, 856:7, 856:22, 871:15, 871:17, 871:18, 872:2, 872:4, 872:19, 888:10, 888:14, 890:6, 892:20, 892:22, 892:23,</p>	<p>894:18, 898:10, 900:2, 912:15, 912:17, 969:22, 974:5 exhibit [4] - 872:6, 893:6, 954:21, 980:7 exhibits [6] - 862:11, 979:2, 979:5, 980:6, 980:8, 980:20 EXHIBITS [1] - 850:1 existence [1] - 920:3 existing [2] - 950:4, 966:13 exiting [1] - 872:10 expanded [1] - 929:2 expect [1] - 898:14 expectation [1] - 960:5 expected [1] - 859:16 expended [2] - 865:19, 965:20 expenses [1] - 966:2 experience [17] - 921:16, 924:2, 927:11, 930:13, 931:11, 932:17, 933:18, 933:23, 936:21, 944:10, 949:14, 949:18, 950:23, 959:24, 960:9, 960:14, 968:21 experienced [1] - 934:13 experiencing [1] - 926:1 expert [21] - 852:24, 853:8, 862:11, 864:14, 865:4, 866:10, 876:3, 877:6, 885:9, 892:1, 915:3, 915:6, 919:15, 920:10, 922:15, 924:20, 924:21, 924:23, 933:12, 935:9, 979:1 Expert [5] - 850:4, 850:5, 850:6, 850:7, 850:8 explain [23] - 870:14, 882:2, 883:13, 883:15, 883:18, 883:19, 891:20, 908:24, 911:5, 911:10, 913:17, 927:10, 930:24, 933:5, 937:17, 938:25, 940:6, 940:10, 946:2, 951:11, 954:3,</p>	<p>954:7, 967:15 explained [4] - 893:1, 912:12, 947:17, 956:5 explaining [2] - 940:8, 956:4 explanation [1] - 892:13 extend [8] - 873:3, 888:7, 893:13, 900:19, 903:7, 903:15, 904:12, 914:19 extended [3] - 857:15, 857:22, 858:7 extending [1] - 871:24 extension [1] - 901:22 extent [9] - 861:19, 900:15, 900:16, 900:18, 900:21, 901:17, 903:25, 904:25 extracting [1] - 886:19 extraction [6] - 863:15, 886:16, 913:16, 913:19, 913:20, 914:6 extreme [3] - 881:18, 881:25, 882:5 extremely [3] - 931:9, 941:9, 941:11</p>	<p>973:16 fairly [1] - 956:9 familiar [4] - 923:10, 933:24, 966:3, 976:12 far [8] - 856:23, 856:24, 878:4, 883:25, 884:16, 897:24, 900:18, 901:22 farthest [2] - 910:20, 911:4 faster [1] - 979:25 fault [1] - 898:25 feasibility [2] - 928:8, 928:19 FEDERAL [3] - 847:24, 981:5, 981:19 feet [13] - 874:19, 878:1, 878:3, 878:7, 881:5, 881:8, 881:15, 882:23, 883:4, 883:6, 884:4, 884:10 fellow [1] - 979:6 fellow's [1] - 980:16 felt [4] - 903:9, 916:12, 970:21, 970:22 few [5] - 910:17, 910:19, 927:3, 956:11, 972:15 field [5] - 852:13, 880:13, 899:11, 899:17, 899:18 Figueroa [1] - 848:6 Figure [2] - 852:6, 905:25 figure [7] - 888:11, 892:3, 892:6, 892:19, 928:9, 936:4, 942:13 final [2] - 942:7, 969:8 finally [2] - 931:4, 945:12 fine [1] - 896:13 finish [2] - 964:15, 979:25 fire [1] - 868:2 fireworks [6] - 868:22, 868:25, 869:4, 869:12, 869:13, 869:18 firm [7] - 856:23, 857:15, 857:21, 858:7, 864:21, 866:9, 935:9 firm's [1] - 856:20 firms [1] - 852:15 first [47] - 854:16,</p>	<p>855:12, 859:20, 859:23, 860:23, 865:7, 867:18, 867:23, 867:24, 872:15, 881:4, 881:21, 881:22, 895:22, 910:15, 910:16, 910:17, 912:9, 915:24, 920:3, 922:13, 923:20, 924:14, 925:9, 925:17, 933:4, 935:2, 935:3, 935:5, 935:20, 936:2, 936:22, 937:10, 937:14, 940:11, 946:3, 946:12, 947:23, 947:25, 948:7, 951:14, 962:10, 969:6, 969:9, 969:17, 976:3, 979:24 firsthand [2] - 870:3, 915:9 fit [1] - 948:20 fits [1] - 882:2 five [2] - 856:25, 876:25 flexibility [2] - 933:24, 934:3 Flexible [1] - 974:8 flexible [3] - 930:1, 930:5, 931:16 Floor [2] - 848:7, 848:10 flow [12] - 857:6, 857:18, 857:19, 899:1, 899:25, 900:10, 906:5, 909:6, 911:13, 911:25, 912:25, 913:10 flowing [2] - 859:17, 888:7 focus [5] - 875:15, 876:5, 904:17, 921:20, 929:12 focused [5] - 920:12, 922:12, 922:14, 925:13, 935:17 focusing [1] - 875:7 follow [4] - 857:6, 872:7, 930:13, 932:7 follow-up [1] - 930:13 followed [1] - 936:6 following [3] - 851:5, 917:8, 927:2 follows [2] - 883:3, 909:23</p>
F				
<p>facilities [2] - 909:18, 937:12 facility [1] - 887:10 fact [23] - 853:19, 854:22, 867:5, 890:25, 904:4, 909:2, 930:24, 931:18, 952:12, 953:2, 953:4, 953:5, 953:10, 955:14, 962:20, 963:1, 965:17, 967:13, 968:18, 969:10, 970:15, 976:15, 978:8 factor [3] - 881:19, 885:8, 885:12 factors [1] - 961:6 facts [13] - 933:21, 951:21, 955:22, 957:12, 961:6, 964:21, 966:3, 966:4, 969:3, 970:14, 973:4, 973:17, 976:12 factual [2] - 957:4,</p>				

<p>FOR [6] - 848:3, 848:12, 850:2, 981:6 force [1] - 957:6 FOREGOING [1] - 981:9 foreseeable [1] - 866:16 forgot [1] - 979:15 formal [1] - 864:21 format [1] - 852:4 FORMAT [1] - 981:11 formations [1] - 878:23 formed [1] - 864:20 foundational [1] - 936:12 four [3] - 859:5, 864:13, 876:25 frame [6] - 927:2, 949:9, 960:3, 965:2, 971:19, 972:12 framed [1] - 973:6 framework [7] - 927:10, 930:15, 931:12, 931:14, 948:20, 958:19, 959:5 Francisco [2] - 848:11, 848:16 frankly [1] - 979:2 FRED [2] - 848:6, 848:14 front [3] - 973:24, 974:1, 979:6 Fryer [1] - 848:19 FUDACZ [1] - 848:6 fulfilled [2] - 940:7, 961:4 full [2] - 862:2, 867:18 fully [1] - 978:9 furthest [1] - 874:25 future [7] - 863:20, 863:24, 863:25, 864:3, 864:12, 877:15, 946:6</p>	<p>general [8] - 864:17, 885:21, 920:7, 927:9, 931:5, 931:12, 941:6, 947:19 generally [7] - 859:3, 861:1, 866:13, 870:18, 873:10, 875:3, 941:7 gentlemen [1] - 917:1 geological [1] - 878:23 gist [1] - 971:3 Given [1] - 885:17 given [10] - 861:24, 868:2, 884:16, 885:13, 907:15, 956:19, 958:14, 964:3, 970:14, 973:21 goal [3] - 858:25, 859:2, 941:1 God [1] - 918:11 gosh [1] - 866:3 govern [1] - 927:17 governed [1] - 923:12 government [2] - 929:20, 930:16 gradient [2] - 910:1, 910:11 graduate [1] - 919:13 great [1] - 963:24 greater [1] - 859:15 green [4] - 874:3, 894:20, 901:15, 955:10 ground [2] - 915:21, 924:1 Groundwater [1] - 865:1 groundwater [48] - 854:18, 857:19, 859:17, 859:18, 859:23, 861:13, 863:15, 866:20, 868:1, 870:19, 870:20, 871:7, 871:10, 877:21, 877:22, 878:5, 878:9, 879:12, 879:20, 880:1, 880:4, 880:14, 881:8, 881:14, 881:24, 883:4, 885:4, 892:3, 898:24, 899:1, 899:24, 906:11, 909:22, 911:14, 913:3, 951:16, 951:18, 952:7,</p>	<p>952:20, 953:3, 954:14, 955:10, 955:14, 962:16, 962:18, 967:12 group [1] - 937:10 grouping [2] - 946:3, 946:12 guarantee [1] - 934:5 guess [5] - 890:17, 921:12, 978:12, 979:19, 979:22</p>	<p>863:13, 890:7 highlight [1] - 937:11 highlighted [1] - 938:3 Hill [1] - 909:13 hired [2] - 852:16, 926:12 historical [2] - 915:8, 956:19 historically [2] - 953:1, 956:20 history [3] - 867:9, 915:5, 919:10 hitting [1] - 888:8 hold [3] - 913:24, 933:3, 968:7 holding [1] - 941:4 home [2] - 950:2, 964:15 honestly [1] - 962:13 Honor [39] - 851:14, 882:21, 896:2, 896:11, 896:17, 896:25, 915:18, 917:14, 917:21, 918:2, 918:18, 919:14, 919:19, 919:24, 920:21, 920:22, 921:2, 921:9, 921:12, 938:15, 938:21, 939:15, 951:20, 952:3, 959:1, 959:19, 960:25, 962:13, 964:5, 964:8, 973:4, 976:20, 977:7, 977:10, 977:14, 978:6, 978:8, 978:18, 980:4 Honor's [1] - 978:24 HONORABLE [1] - 847:3 hoping [1] - 980:14 hour [1] - 979:16 hours [2] - 865:19, 865:21 HS [1] - 881:9 HUIE [1] - 848:13 Hula [11] - 869:19, 884:1, 884:2, 884:7, 884:9, 890:20, 893:17, 893:22, 898:12 humor [1] - 919:23 hundred [1] - 878:7</p>	<p>IDENTIFICATION [1] - 850:2 identification [5] - 871:16, 872:3, 872:18, 888:13, 892:21 identified [5] - 940:17, 940:18, 945:25, 947:7, 948:9 identifying [4] - 927:23, 947:10, 961:24, 962:8 ignore [1] - 968:1 ILSE [1] - 848:9 imagine [2] - 865:21, 897:22 immaterial [3] - 958:20, 959:5, 960:16 immediate [3] - 928:16, 928:22, 960:6 immediately [1] - 962:16 impact [1] - 937:5 impacted [3] - 882:12, 907:20, 909:9 impactful [1] - 951:3 impacts [4] - 866:13, 866:15, 876:11, 972:10 impaired [2] - 941:9, 941:11 impeachment [1] - 908:18 implement [5] - 922:25, 923:8, 923:21, 926:12, 927:13 implementation [2] - 938:23, 939:1 implementing [1] - 927:15 implication [1] - 960:2 implications [1] - 963:22 important [13] - 903:19, 921:24, 928:3, 931:9, 931:21, 933:2, 949:16, 954:25, 956:6, 958:23, 960:11, 968:2, 968:24 imported [9] - 942:21, 943:17, 944:6, 944:15, 946:2, 948:5, 952:20, 956:3, 959:22 imposed [2] - 936:25,</p>	
<p>G</p>	<p>Gabriel [1] - 898:25 GALLAGHER [2] - 848:13, 848:14 gallons [2] - 914:9, 914:10 gathering [1] - 888:1 GEE [7] - 848:4, 875:11, 908:18, 911:9, 915:22, 916:4, 916:21 Gee [4] - 849:5, 852:2, 883:20, 911:7</p>	<p>H</p>	<p>half [1] - 935:14 hand [5] - 890:6, 896:2, 918:7, 939:10, 944:18 handle [1] - 929:1 hang [3] - 906:12, 908:12, 939:25 happy [1] - 932:8 hard [1] - 892:16 hazardous [11] - 869:12, 920:11, 921:22, 922:12, 923:6, 927:23, 928:3, 929:10, 936:17, 936:23, 936:24 head [2] - 896:10, 911:16 headquarters [1] - 923:24 health [5] - 858:25, 859:2, 937:5, 949:11, 949:22 hear [5] - 918:23, 939:10, 939:15, 939:19, 978:16 HELD [1] - 981:10 held [2] - 851:5, 917:8 help [4] - 855:12, 918:10, 926:12, 939:4 helped [2] - 925:23, 926:16 helping [2] - 925:22, 926:8 helps [1] - 951:12 HEREBY [1] - 981:7 heterogeneous [3] - 878:22, 878:24, 879:8 high [3] - 873:2, 903:18, 905:5 higher [2] - 872:23, 872:25 highest [5] - 859:9, 862:16, 862:23,</p>	<p>I</p>	<p>ID [1] - 853:5 idea [1] - 904:2</p>

<p>937:17 imposing [2] - 947:1, 963:7 impoundment [4] - 878:6, 878:9, 879:20, 879:21 improper [1] - 908:18 IN [3] - 981:6, 981:10, 981:11 Inc [1] - 864:22 include [13] - 877:10, 877:18, 893:25, 894:2, 894:5, 894:7, 899:6, 899:11, 903:7, 904:1, 905:1, 929:2, 952:1 included [5] - 854:3, 893:8, 915:8, 922:5, 941:18 includes [2] - 894:2, 928:14 including [5] - 851:8, 868:1, 869:12, 922:4, 974:8 Incorporating [1] - 854:17 incorrect [1] - 867:7 increase [1] - 952:10 incur [1] - 966:2 incurred [6] - 924:13, 924:14, 929:16, 936:16, 937:24, 943:12 incurring [1] - 935:17 indeed [3] - 857:20, 900:10, 935:1 independent [2] - 875:6, 891:12 INDEX [2] - 849:1, 850:1 indicate [3] - 869:11, 913:9, 953:13 indication [1] - 854:23 individual [3] - 877:1, 881:9, 950:1 industry [1] - 868:4 influence [3] - 876:6, 876:7, 933:7 Information [1] - 954:23 information [37] - 853:18, 859:24, 860:7, 860:10, 862:6, 862:8, 865:25, 868:14, 871:3, 882:17, 884:20, 885:6, 892:7, 904:6, 904:7, 909:16, 909:17, 915:1, 915:2, 915:7,</p>	<p>915:8, 915:12, 915:15, 915:23, 916:11, 954:16, 955:4, 955:16, 955:24, 956:7, 956:25, 957:2, 957:15, 957:20, 958:4, 962:19, 964:3 informed [1] - 952:14 inherent [1] - 933:25 initiative [1] - 929:6 input [4] - 923:17, 923:25, 924:6, 953:16 inside [2] - 952:25, 968:16 install [1] - 913:19 installed [5] - 871:9, 886:24, 887:2, 887:4, 897:16 instance [8] - 857:12, 862:5, 863:5, 871:5, 883:11, 893:5, 893:25, 900:22 instead [1] - 934:4 instruction [1] - 930:25 instructions [2] - 931:5, 978:21 insubstantial [2] - 932:25, 960:16 intact [1] - 869:14 intend [1] - 977:20 intent [3] - 934:10, 934:14, 959:22 intentionally [1] - 916:13 interact [1] - 922:9 interacting [1] - 922:2 interactions [2] - 956:25, 957:8 interactive [1] - 860:21 interested [1] - 885:20 internal [2] - 925:20, 935:11 interpret [1] - 932:23 interpretation [2] - 873:4, 873:13 interrupt [2] - 922:19, 975:4 introduce [1] - 977:20 intuitive [2] - 860:18, 860:20 investigate [1] - 928:6 investigation [6] - 869:25, 909:11, 915:4, 928:7, 928:19, 937:21 invoices [3] - 925:21,</p>	<p>935:24, 945:7 involve [8] - 949:23, 949:25, 950:1, 967:9, 967:14, 967:24, 975:24, 976:2 involved [5] - 885:9, 917:4, 922:8, 933:7, 949:18 involvement [9] - 950:9, 950:10, 950:19, 953:9, 954:1, 955:20, 956:8, 956:19, 958:15 involves [1] - 966:22 involving [2] - 921:16, 928:13 IS [2] - 981:9, 981:11 isolation [1] - 909:1 issue [15] - 859:5, 861:4, 864:1, 864:4, 867:2, 883:16, 896:10, 937:24, 942:6, 947:11, 950:8, 955:1, 957:19, 965:18, 967:3 issues [13] - 859:20, 864:17, 885:11, 917:25, 925:12, 927:4, 937:25, 940:18, 978:1, 978:20, 978:22, 979:7, 980:2 item [3] - 937:14, 937:15, 938:2 itself [5] - 930:12, 932:4, 958:19, 959:8, 959:15</p>	<p>931:20, 932:20, 936:5, 955:19, 971:18 judgments [3] - 931:24, 933:20, 968:25 JUDICIAL [1] - 981:12 June [4] - 852:10, 857:25, 895:23, 897:5 jury [9] - 851:6, 851:9, 856:22, 887:21, 916:19, 917:9, 917:24, 977:23, 978:21</p>	<p>large [3] - 887:24, 900:12, 974:2 larger [2] - 888:4, 888:6 last [24] - 855:16, 881:4, 881:7, 883:2, 905:17, 905:22, 905:23, 911:10, 918:14, 925:3, 929:23, 933:4, 938:2, 943:10, 944:5, 946:1, 948:4, 950:25, 957:11, 964:17, 967:18, 980:10, 980:16 lasted [3] - 975:6, 975:9 lasting [3] - 968:18, 969:10, 976:15 late [4] - 869:23, 887:3, 980:10, 980:16 lateral [10] - 900:14, 900:15, 900:16, 900:18, 900:19, 900:21, 901:17, 901:22, 903:25, 904:25 laterally [1] - 903:15 law [4] - 923:20, 923:21, 927:14, 935:9 lay [1] - 926:17 lead [2] - 913:12, 960:15 leaking [1] - 879:20 least [18] - 858:8, 859:9, 865:12, 867:12, 867:15, 873:2, 876:19, 876:25, 879:10, 879:17, 883:11, 889:10, 905:10, 920:24, 924:4, 962:19, 973:9 leave [7] - 867:3, 911:16, 961:11, 961:13, 964:3, 977:9, 977:16 led [3] - 930:16, 941:12, 941:13 left [5] - 856:11, 894:19, 920:6, 920:8, 922:11 legal [3] - 956:12, 959:2, 959:12 legend [1] - 856:11 legitimate [1] - 935:18 less [2] - 875:8, 935:21</p>
			K	
			<p>keep [4] - 913:23, 917:5, 925:18, 935:12 keeping [1] - 922:11 Keith [5] - 864:20, 864:21, 948:9, 948:17, 977:24 Kennedy [2] - 877:2, 877:8 kept [2] - 864:24, 925:21 Kern [1] - 972:25 key [1] - 932:15 kind [12] - 870:23, 887:23, 887:24, 900:24, 928:10, 929:17, 938:19, 945:15, 948:19, 953:20, 965:2, 967:21 kinds [2] - 963:22, 976:4 knowing [1] - 938:4 knowledge [1] - 930:4 knows [3] - 950:18, 955:12, 957:9</p>	
			L	
			<p>lab [3] - 871:2, 891:8, 897:14 labeled [1] - 886:15 laboratory [1] - 897:12 ladies [1] - 917:1 laid [5] - 926:11, 936:6, 958:12, 963:10, 964:22 Land [2] - 974:9, 974:11 landfills [1] - 869:4 language [1] - 968:13 Lardiere [1] - 848:20</p>	
		J		
		<p>Jeffrey [3] - 849:7, 918:3, 918:15 JEFFREY [1] - 918:19 Jenks [2] - 877:2, 877:8 job [3] - 875:20, 889:18, 935:3 jobs [1] - 933:12 joined [2] - 920:3, 923:19 JR [2] - 847:3, 848:14 Judge [3] - 931:19, 958:17, 969:8 JUDGE [1] - 847:3 judge's [1] - 927:3 judging [1] - 979:4 judgment [6] - 931:17,</p>		

<p>letter [1] - 969:22</p> <p>letting [2] - 911:19, 912:5</p> <p>level [3] - 872:21, 897:13, 919:13</p> <p>levels [4] - 939:14, 939:16, 944:10, 970:15</p> <p>liability [2] - 929:16, 930:8</p> <p>lieu [1] - 973:10</p> <p>likely [10] - 868:4, 868:5, 868:7, 868:9, 868:15, 868:16, 909:15, 914:15, 914:19</p> <p>limited [1] - 960:23</p> <p>limits [1] - 891:8</p> <p>line [18] - 873:6, 900:22, 900:24, 900:25, 901:2, 901:5, 904:9, 904:10, 904:21, 905:11, 908:10, 908:11, 908:13, 953:19, 961:1</p> <p>linear [2] - 881:24, 883:4</p> <p>lined [1] - 926:17</p> <p>lines [17] - 856:17, 857:6, 857:10, 857:15, 857:22, 858:8, 858:16, 873:5, 874:1, 874:3, 874:4, 893:12, 893:16, 896:14, 900:14, 904:2, 955:25</p> <p>lingo [1] - 974:21</p> <p>list [4] - 853:4, 938:2, 941:16, 941:18</p> <p>listed [1] - 946:14</p> <p>listen [1] - 883:22</p> <p>liter [2] - 859:13, 862:24</p> <p>literature [1] - 889:4</p> <p>litigation [1] - 924:19</p> <p>LLP [2] - 848:4, 848:9</p> <p>local [1] - 952:19</p> <p>location [2] - 884:18, 897:19</p> <p>locations [1] - 898:16</p> <p>long-term [4] - 923:15, 925:24, 941:20, 947:10</p> <p>look [48] - 856:2, 856:4, 856:8, 856:9, 857:12, 857:23, 862:7, 862:10, 862:15, 863:1,</p>	<p>868:24, 869:2, 871:12, 871:15, 873:5, 875:9, 875:18, 883:12, 891:6, 891:25, 893:5, 893:11, 897:25, 901:18, 902:4, 909:1, 909:8, 909:12, 909:19, 912:16, 914:1, 931:6, 931:22, 931:25, 932:22, 932:24, 933:12, 933:21, 937:10, 960:1, 968:12, 970:2, 971:11, 971:17, 973:21, 974:24, 976:16, 978:14</p> <p>looked [13] - 875:4, 877:22, 879:13, 891:21, 891:23, 891:24, 909:15, 909:17, 935:25, 945:3, 946:20, 970:3</p> <p>looking [20] - 861:21, 865:16, 880:18, 881:10, 893:1, 893:12, 895:24, 925:24, 928:8, 928:11, 929:13, 938:10, 940:8, 953:25, 954:19, 959:12, 963:4, 968:6, 980:10, 980:19</p> <p>looks [1] - 856:7</p> <p>LOS [3] - 847:15, 847:25, 851:2</p> <p>Los [1] - 848:7</p> <p>lost [8] - 943:6, 944:4, 944:13, 948:23, 962:4, 962:18, 963:15, 972:13</p> <p>loudly [2] - 939:20, 940:3</p> <p>love [1] - 858:17</p> <p>low [4] - 870:24, 871:2, 889:14, 889:21</p> <p>lower [1] - 882:19</p>	<p>892:2, 896:14, 897:2, 903:2, 903:13, 904:17, 905:17, 907:9, 909:8</p> <p>magnitude [1] - 885:7</p> <p>main [1] - 888:18</p> <p>maintain [2] - 937:13, 946:5</p> <p>maintaining [2] - 937:22, 937:25</p> <p>major [2] - 930:19, 930:21</p> <p>Mall [6] - 875:1, 875:5, 875:10, 877:11, 877:18, 902:19</p> <p>Management [2] - 956:2, 973:22</p> <p>manager [1] - 947:19</p> <p>managing [1] - 921:22</p> <p>manner [1] - 855:6</p> <p>manufacture [1] - 868:22</p> <p>manufacturing [2] - 867:25, 868:25</p> <p>map [4] - 852:18, 857:8, 863:13, 871:19</p> <p>maps [6] - 852:7, 853:23, 856:2, 856:5, 872:10, 890:7</p> <p>mark [2] - 920:24, 921:1</p> <p>Marked [5] - 871:16, 872:3, 872:18, 888:13, 892:21</p> <p>marking [1] - 920:25</p> <p>Masard [1] - 978:8</p> <p>Masnada [4] - 978:1, 978:25, 979:11, 979:22</p> <p>material [2] - 886:2, 959:25</p> <p>materials [3] - 869:12, 869:16, 916:17</p> <p>mathematical [1] - 906:9</p> <p>Matt [2] - 848:19, 947:19</p> <p>MATTER [1] - 981:11</p> <p>matter [14] - 851:8, 863:3, 917:4, 917:24, 921:21, 924:10, 924:11, 934:17, 958:11, 968:19, 975:8, 975:23, 976:16, 980:22</p> <p>matters [2] - 920:11, 933:7</p> <p>maximum [3] - 861:6,</p>	<p>861:9, 861:16</p> <p>MCGUANE [1] - 848:5</p> <p>MCL [10] - 858:22, 859:6, 866:22, 867:3, 969:18, 970:3, 970:8, 970:12, 970:23, 971:8</p> <p>MCLs [4] - 859:15, 863:7, 873:3, 969:24</p> <p>mean [30] - 852:10, 856:1, 857:5, 860:21, 867:1, 868:7, 873:1, 876:8, 876:9, 878:21, 879:1, 879:3, 888:24, 890:14, 891:3, 897:11, 900:15, 900:17, 901:9, 908:8, 914:18, 929:4, 936:19, 949:6, 956:11, 960:10, 966:18, 970:4, 975:3, 975:23</p> <p>meaning [1] - 911:19</p> <p>means [13] - 852:12, 853:14, 857:6, 868:9, 878:24, 884:22, 897:12, 900:18, 900:21, 914:17, 922:23, 922:24, 961:23</p> <p>meant [1] - 913:22</p> <p>meantime [1] - 943:5</p> <p>measure [2] - 861:12, 867:6</p> <p>measured [2] - 852:13, 899:16</p> <p>measuring [1] - 962:8</p> <p>mechanical [1] - 889:2</p> <p>mechanism [1] - 972:19</p> <p>meet [6] - 934:4, 937:7, 940:21, 942:2, 947:13, 948:2</p> <p>meetings [2] - 924:4, 958:9</p> <p>meets [1] - 941:11</p> <p>memorized [2] - 863:2, 895:25</p> <p>mentioned [9] - 872:24, 880:12, 908:15, 908:22, 914:22, 940:9, 942:10, 948:7, 967:20</p> <p>mere [2] - 902:21, 909:2</p>	<p>Meredith [1] - 877:1</p> <p>met [4] - 946:16, 946:19, 947:25, 952:21</p> <p>method [1] - 897:13</p> <p>methodology [2] - 934:19, 934:21</p> <p>MICHAEL [1] - 848:14</p> <p>Mickelson [6] - 869:25, 870:2, 915:3, 915:11, 915:25, 916:5</p> <p>micrograms [2] - 859:13, 862:24</p> <p>mid [1] - 865:12</p> <p>middle [1] - 897:25</p> <p>might [10] - 855:17, 867:21, 900:18, 904:11, 928:10, 931:25, 939:4, 949:24, 950:4, 958:20</p> <p>migrate [8] - 880:2, 880:8, 883:5, 883:6, 898:16, 912:6, 913:7, 913:23</p> <p>migrated [1] - 886:2</p> <p>migrating [4] - 861:11, 902:7, 902:10, 913:4</p> <p>migrations [1] - 902:5</p> <p>mile [1] - 874:20</p> <p>million [9] - 859:11, 935:6, 935:14, 935:20, 935:21, 935:22, 936:10, 944:6, 948:15</p> <p>mind [3] - 873:17, 874:24, 917:5</p> <p>mindful [1] - 896:20</p> <p>minimal [2] - 953:10, 956:9</p> <p>minor [1] - 930:20</p> <p>minute [2] - 914:9, 914:10</p> <p>minutes [1] - 917:19</p> <p>MIRANDA [4] - 847:23, 981:5, 981:18, 981:19</p> <p>MIRANDAALGORRI @GMAIL.COM [1] - 847:25</p> <p>misleading [1] - 916:13</p> <p>missed [2] - 926:4, 961:7</p> <p>missile [1] - 869:13</p> <p>misstated [1] - 911:1</p> <p>misstates [1] - 973:3</p> <p>mistake [1] - 872:15</p> <p>mixture [2] - 952:19,</p>
<p>M</p>				
<p>ma'am [21] - 853:9, 855:8, 857:9, 864:18, 865:23, 869:7, 874:15, 882:3, 882:22, 886:12, 891:12,</p>				

<p>953:3 model [5] - 898:24, 899:12, 899:16, 899:19, 899:21 models [1] - 899:18 modified [1] - 864:25 molecular [1] - 888:24 moment [5] - 884:6, 917:11, 964:8, 964:20, 977:18 Monday [1] - 978:11 MONDAY [2] - 847:14, 851:1 money [8] - 866:5, 941:2, 943:11, 947:3, 947:4, 948:9, 956:20, 965:19 monitored [1] - 895:16 monitoring [12] - 853:20, 853:23, 854:19, 854:22, 855:17, 860:1, 860:4, 860:17, 861:24, 872:22, 888:6, 894:10 month [4] - 895:13, 895:14, 895:15 monthly [1] - 895:16 months [6] - 962:1, 962:3, 963:2, 963:4, 963:8 most [10] - 867:25, 878:23, 897:17, 914:8, 921:24, 945:3, 945:7, 960:12, 976:12, 980:15 mostly [2] - 883:12, 883:14 move [25] - 858:13, 859:19, 861:4, 861:13, 867:9, 871:14, 872:17, 877:20, 879:11, 879:19, 885:4, 886:9, 905:15, 905:16, 905:21, 905:22, 905:24, 913:14, 924:8, 938:22, 939:10, 940:2, 956:15, 960:19 moved [4] - 856:23, 856:24, 884:18, 905:11 moves [1] - 878:18 moving [1] - 941:16 MP [3] - 903:5, 905:1, 905:13</p>	<p>MP1 [22] - 895:6, 895:7, 895:16, 895:19, 898:1, 900:23, 901:13, 901:25, 902:1, 902:2, 903:6, 903:7, 903:14, 903:15, 903:16, 903:17, 904:1, 904:18, 905:4, 905:9 MP1's [1] - 905:4 MP1-01 [1] - 894:14 MPL [1] - 928:15 MR [100] - 851:18, 856:1, 862:18, 862:22, 868:19, 870:18, 871:18, 872:1, 872:8, 872:20, 875:11, 875:19, 882:21, 883:25, 888:10, 888:15, 890:9, 890:11, 890:13, 892:19, 892:23, 894:17, 895:3, 896:2, 896:7, 896:11, 896:14, 896:17, 896:25, 897:1, 903:13, 905:16, 905:21, 908:2, 908:13, 908:17, 908:18, 908:21, 911:2, 911:9, 915:18, 915:22, 916:1, 916:4, 916:21, 916:23, 917:14, 917:21, 918:2, 918:18, 918:22, 919:14, 919:18, 919:23, 920:21, 921:1, 921:2, 921:4, 921:8, 921:12, 926:20, 938:15, 938:21, 939:15, 939:23, 951:20, 952:3, 952:18, 956:12, 956:15, 956:22, 956:24, 957:10, 957:14, 959:1, 959:18, 960:19, 960:25, 961:11, 964:4, 964:8, 964:12, 971:5, 973:3, 973:7, 973:13, 973:20, 976:19, 976:24, 977:7, 977:9, 977:15, 977:22, 978:6, 978:18,</p>	<p>978:24, 979:11, 979:15, 980:4, 980:9 MS [3] - 921:14, 938:22, 940:6 multiple [1] - 859:14 must [3] - 860:1, 897:10, 932:11</p> <p style="text-align: center;">N</p> <p>Najm [6] - 979:6, 979:12, 979:14, 979:19, 979:24, 980:6 Najm's [1] - 980:19 name [5] - 864:21, 864:25, 918:14, 918:15 named [1] - 877:1 narrative [1] - 956:4 nation's [1] - 923:4 national [4] - 921:25, 922:23, 925:1, 930:25 nationally [1] - 923:24 nature [2] - 934:20, 953:10 NC-12 [1] - 893:4 NC-13 [1] - 893:4 NCP [60] - 922:16, 922:20, 922:22, 923:8, 924:9, 924:15, 925:8, 926:10, 927:10, 927:17, 928:3, 929:21, 929:22, 930:9, 930:12, 930:14, 931:13, 932:3, 932:11, 932:16, 933:8, 933:11, 933:14, 934:5, 934:12, 936:5, 936:7, 936:21, 939:2, 939:5, 942:17, 943:22, 944:17, 944:25, 945:2, 945:10, 945:18, 946:10, 947:13, 948:1, 948:4, 948:21, 958:18, 959:5, 959:7, 959:8, 959:14, 959:15, 959:25, 960:11, 961:2, 961:5, 967:25, 968:6, 968:10, 968:12, 969:2, 970:1, 976:8, 976:12 NCPs [1] - 950:8</p>	<p>near [1] - 876:1 Necessary [1] - 938:11 necessary [17] - 907:12, 924:14, 936:8, 936:18, 936:20, 937:4, 937:6, 938:7, 942:3, 942:17, 942:18, 942:19, 943:21, 943:23, 944:16, 944:18, 958:23 necessity [3] - 922:15, 937:8, 970:1 need [21] - 854:20, 861:1, 861:2, 861:25, 896:5, 909:6, 920:24, 927:16, 930:24, 936:12, 940:21, 942:5, 942:14, 962:1, 964:23, 965:8, 973:17, 975:24, 976:2, 978:13, 980:11 needed [6] - 912:1, 934:3, 946:21, 952:13, 978:10, 979:25 needs [3] - 927:25, 940:25, 941:19 never [6] - 863:6, 863:19, 863:25, 864:11, 874:23, 921:2 new [3] - 874:11, 952:12, 955:15 New [2] - 919:12, 921:19 Newhall [2] - 974:9, 974:11 next [18] - 855:24, 861:2, 861:4, 868:18, 881:1, 881:2, 881:3, 881:7, 881:20, 883:16, 905:22, 918:1, 921:1, 922:22, 935:22, 935:23, 964:5, 978:10 nexus [2] - 937:1, 937:19 Nickel [1] - 974:9 night [2] - 980:10, 980:16 NO [2] - 847:6, 981:19 nobody [1] - 866:24 non [21] - 897:5, 897:11, 906:16, 906:17, 906:24,</p>	<p>928:22, 939:14, 939:17, 940:21, 941:1, 941:14, 945:17, 947:2, 947:11, 947:13, 961:23, 962:2, 962:21, 963:6, 963:13, 977:5 non-detect [11] - 897:5, 897:11, 939:14, 939:17, 940:21, 941:1, 941:14, 947:2, 947:11, 963:6, 977:5 non-parametric [1] - 906:16 non-parametrically [1] - 906:24 non-time [7] - 928:22, 945:17, 947:13, 961:23, 962:2, 962:21, 963:13 noncompliance [1] - 941:3 nonhazardous [1] - 869:11 Norris [2] - 919:4, 919:8 north [2] - 901:18, 901:22 northern [1] - 890:16 northwest [1] - 898:21 NOSSAMAN [2] - 848:4, 848:9 nothing [8] - 904:5, 910:11, 913:22, 918:10, 952:24, 956:11, 960:17, 962:23 notification [5] - 953:12, 958:13, 960:4, 960:7, 960:15 notify [3] - 959:21, 976:14, 979:24 November [1] - 938:12 NOVEMBER [3] - 847:14, 851:1, 981:15 NP.01 [1] - 857:14 nub [1] - 980:12 number [9] - 862:22, 862:23, 863:10, 865:24, 881:18, 882:23, 884:5, 928:6 NUMBER [1] - 850:3 numbered [1] - 954:21 numbers [5] - 884:22, 884:24, 884:25, 945:6 numerical [1] - 899:19</p>
--	---	--	---	--

numerous [1] - 878:19	883:14, 884:17, 884:20, 892:11, 902:8, 902:10, 907:10, 912:20, 913:14	859:10, 917:5, 917:9	978:20, 978:22	978:10
O				
o'clock [1] - 979:25		opened [1] - 916:2	overall [1] - 899:15	participated [3] - 924:4, 957:6, 957:7
oath [1] - 851:11	often [2] - 892:2, 898:22	opening [1] - 920:23	overrule [2] - 951:23, 960:21	participation [11] - 947:7, 947:21, 953:21, 954:25, 960:10, 961:19, 962:7, 962:21, 964:18, 969:3, 976:9
object [2] - 938:15, 951:20	oftentimes [1] - 855:14	openly [1] - 942:14	overruled [5] - 875:13, 915:20, 916:2, 938:18, 973:14	particular [6] - 863:12, 870:25, 899:23, 926:13, 955:21, 976:22
objected [2] - 980:20, 980:21	once [2] - 928:8, 936:4	operate [5] - 887:7, 913:19, 943:6, 970:16, 970:19	oversight [1] - 929:9	
objected-to [1] - 980:20	one [68] - 852:14, 852:18, 852:21, 853:1, 853:20, 854:14, 856:4, 861:10, 861:13, 861:21, 861:24, 863:10, 863:14, 865:5, 865:6, 865:11, 866:19, 869:17, 879:2, 879:10, 881:15, 881:16, 881:17, 884:18, 888:12, 890:3, 892:24, 894:14, 894:15, 894:18, 895:5, 895:15, 895:20, 897:25, 899:14, 900:8, 902:6, 902:25, 904:11, 906:5, 906:9, 908:5, 908:16, 911:15, 918:25, 923:22, 933:4, 933:12, 934:22, 935:4, 938:8, 939:5, 944:18, 945:15, 946:21, 947:12, 949:7, 953:21, 958:24, 970:18, 970:25, 973:20, 979:3, 980:14	Operating [1] - 945:8	own [1] - 929:6	
objected-to [1] - 980:20		operating [8] - 863:17, 877:17, 886:17, 895:7, 935:16, 957:5, 970:5, 970:9	P	
objection [10] - 875:11, 915:18, 921:11, 956:22, 957:10, 959:1, 960:21, 973:3, 973:13, 976:19		operator [1] - 886:1	P.M [2] - 847:14, 851:1	particularly [2] - 921:21, 947:2
objections [1] - 980:10		opinion [11] - 863:20, 863:25, 864:4, 864:12, 868:10, 868:13, 889:5, 962:20, 965:5, 969:13, 975:14	p.m [2] - 917:22, 980:25	parties [17] - 927:14, 927:20, 927:21, 927:25, 929:3, 929:5, 929:14, 929:16, 929:23, 930:2, 930:3, 930:6, 930:8, 932:22, 934:7, 951:24, 980:18
objective [4] - 861:21, 861:22, 899:22, 899:23		opinions [3] - 864:8, 922:15, 922:18	page [16] - 853:8, 854:16, 855:9, 855:12, 867:18, 869:7, 881:1, 881:3, 881:7, 881:10, 881:20, 883:2, 884:4, 908:10, 951:7, 954:20	
obligation [4] - 961:5, 966:1, 966:10, 967:14		opportunity [9] - 861:17, 870:15, 876:17, 883:18, 883:19, 908:24, 931:19, 979:2, 980:11	PAGE [2] - 849:3, 981:11	partly [2] - 883:8, 883:9
obligations [1] - 946:5		opposed [1] - 929:21	PAGES [1] - 847:8	parts [5] - 856:25, 859:13, 873:6, 874:11, 947:9
obtain [1] - 946:5		opposing [1] - 980:12	paid [9] - 866:5, 866:10, 943:9, 956:20, 957:4, 957:5, 965:11, 965:25	party [14] - 929:21, 930:10, 930:16, 931:13, 932:14, 932:16, 932:24, 933:9, 933:11, 934:1, 934:4, 934:22, 936:25, 953:16
obtained [2] - 919:12, 946:23		option [1] - 972:10	paragraph [9] - 867:18, 867:23, 870:1, 881:5, 881:21, 881:22, 882:8, 882:10, 883:2	pass [1] - 935:15
obviously [1] - 969:7		options [5] - 945:16, 963:9, 963:10, 972:14, 974:22	parameters [2] - 866:1, 907:2	passed [3] - 923:2, 923:20, 923:23
occupied [2] - 885:18, 885:22		order [12] - 878:8, 885:7, 888:19, 907:12, 921:1, 939:7, 942:5, 946:5, 948:15, 948:23, 972:11, 977:1	parametric [3] - 906:12, 906:16, 906:17	past [4] - 861:15, 900:11, 923:5, 927:3
occupies [1] - 901:12		orders [1] - 860:12	parametrically [1] - 906:24	paths [1] - 857:18
occur [3] - 899:2, 961:19, 967:19		organizational [1] - 927:14	parcel [1] - 931:7	pathway [36] - 889:19, 891:2, 891:3, 891:4, 898:15, 898:20, 899:15, 901:5, 901:7, 901:8, 901:12, 901:13, 901:16, 901:17, 901:23, 902:1, 903:6, 903:14, 903:25, 904:3, 904:5, 904:9, 904:10, 904:20, 904:23, 904:25, 905:6, 905:11, 908:6, 909:1, 909:2, 909:5, 909:7, 911:17, 912:5
occurred [5] - 904:14, 911:24, 911:25, 961:18		original [2] - 968:19, 976:13	parsing [1] - 965:16	
occurring [3] - 911:17, 932:19, 940:23		originally [1] - 927:17	part [31] - 852:6, 856:7, 859:11, 864:14, 875:20, 876:4, 879:2, 879:3, 884:2, 884:19, 885:4, 889:17, 889:20, 890:16, 890:17, 894:21, 898:23, 913:18, 920:19, 925:3, 925:17, 926:13, 931:7, 936:22, 945:7, 956:16, 957:4, 959:8, 969:12, 976:8,	
odd [1] - 899:2	one-time [1] - 863:14	organizational [1] - 927:14		
OF [11] - 847:2, 847:13, 848:1, 849:1, 850:1, 981:1, 981:7, 981:9, 981:12, 981:15	ones [4] - 852:2, 855:3, 891:21, 928:22	original [2] - 968:19, 976:13		
Officer [1] - 945:8	online [4] - 886:22, 887:2, 887:10, 887:12	otherwise [2] - 957:1, 958:22		
official [1] - 864:21	onsite [15] - 861:7, 862:18, 880:17, 883:4, 883:8, 884:16, 884:21, 884:22, 890:4, 907:6, 912:20, 912:22, 913:16, 913:25, 967:23	OU-3 [1] - 873:8		
OFFICIAL [4] - 847:24, 981:1, 981:5, 981:19		OU-4 [3] - 873:8, 884:9, 894:21		
offline [1] - 887:6		OU-7 [1] - 854:19		
offset [1] - 871:9		outlined [2] - 933:25, 938:24		
offsite [18] - 863:6, 863:9, 866:13, 866:16, 870:19, 880:17, 881:9, 883:9, 883:12,	oOo [1] - 851:3	outside [6] - 875:11, 875:21, 902:17, 917:9, 917:24, 925:22		
	oops [1] - 970:11	outstanding [2] -		
	open [4] - 851:6,			

<p>pathways [15] - 875:7, 898:17, 899:10, 899:24, 900:3, 901:10, 902:5, 904:7, 907:20, 909:20, 912:18, 913:7, 913:11, 913:15, 914:13</p> <p>PATRICK [1] - 848:5</p> <p>pause [1] - 896:22</p> <p>pay [1] - 966:7</p> <p>paying [6] - 943:16, 965:4, 965:7, 965:10, 965:14, 965:22</p> <p>pays [1] - 965:16</p> <p>PCE [5] - 857:20, 871:1, 888:19, 888:25, 894:2</p> <p>Peloquin [1] - 979:23</p> <p>people [3] - 917:4, 923:13, 923:24</p> <p>per [18] - 856:25, 859:11, 859:13, 862:24, 873:6, 874:11, 881:8, 881:15, 882:23, 883:5, 895:10, 895:12, 895:13, 895:14, 895:15, 914:9</p> <p>percent [5] - 876:9, 907:3, 943:18</p> <p>percentage [1] - 907:11</p> <p>percentages [1] - 884:16</p> <p>perchlorate [43] - 852:6, 856:3, 856:5, 858:12, 865:11, 866:12, 867:1, 867:8, 879:19, 887:5, 887:9, 894:7, 898:13, 898:14, 906:22, 909:21, 913:2, 913:4, 913:6, 913:10, 913:15, 926:6, 937:12, 937:21, 937:23, 938:5, 938:23, 939:1, 940:9, 940:10, 940:17, 940:18, 940:19, 942:15, 942:19, 943:5, 944:10, 944:19, 969:14, 969:18, 969:24, 970:8, 971:8</p> <p>perchlorate's [1] - 866:15</p>	<p>perform [1] - 945:12</p> <p>performed [1] - 922:6</p> <p>perhaps [2] - 895:24, 904:4</p> <p>period [9] - 852:12, 856:18, 867:13, 882:12, 885:18, 885:22, 886:1, 943:15, 957:5</p> <p>periods [1] - 885:13</p> <p>permanently [1] - 963:6</p> <p>permit [14] - 926:6, 937:13, 937:14, 938:7, 939:8, 939:12, 940:18, 940:19, 940:23, 942:4, 942:5, 942:19, 943:13, 946:6</p> <p>permits [9] - 937:25, 938:7, 939:7, 941:4, 946:4, 946:21, 946:24, 947:1</p> <p>permitting [6] - 937:12, 940:25, 941:13, 945:4, 946:6, 946:18</p> <p>personally [2] - 950:14, 953:25</p> <p>perspective [2] - 907:19, 930:6</p> <p>pertains [1] - 855:7</p> <p>PG [2] - 850:3</p> <p>phosphorous [1] - 869:15</p> <p>photographs [2] - 953:7, 967:7</p> <p>phrases [1] - 933:2</p> <p>Phyllis [1] - 849:4</p> <p>PHYLLIS [1] - 851:15</p> <p>physical [1] - 899:20</p> <p>pick [1] - 917:2</p> <p>picking [1] - 882:17</p> <p>pictures [1] - 921:9</p> <p>piece [5] - 861:25, 862:5, 862:8, 915:5, 955:15</p> <p>pieces [1] - 956:7</p> <p>pink [1] - 856:7</p> <p>pipe [1] - 968:16</p> <p>pipng [1] - 952:25</p> <p>place [4] - 863:18, 912:4, 969:6, 969:9</p> <p>places [1] - 860:25</p> <p>plagiarized [1] - 870:1</p> <p>plaintiff [2] - 918:2, 978:23</p> <p>PLAINTIFF [4] - 847:6, 848:3, 851:16,</p>	<p>918:20</p> <p>plaintiffs [1] - 866:6</p> <p>plan [6] - 922:24, 925:1, 926:7, 930:25, 940:19, 974:12</p> <p>Plan [3] - 956:2, 973:22, 974:8</p> <p>plans [1] - 887:20</p> <p>plant [1] - 943:5</p> <p>plausible [2] - 914:13, 914:17</p> <p>play [3] - 933:17, 933:19, 979:16</p> <p>playing [1] - 921:11</p> <p>plumbing [2] - 966:19, 966:23</p> <p>plume [4] - 853:23, 856:2, 856:5, 861:17</p> <p>plumes [3] - 856:3, 861:13, 904:3</p> <p>plural [1] - 854:23</p> <p>plus [1] - 974:11</p> <p>point [17] - 867:17, 868:20, 875:23, 908:15, 919:25, 929:19, 929:23, 931:9, 957:11, 960:24, 967:25, 968:10, 969:1, 976:8, 976:17, 977:1, 978:19</p> <p>pointed [1] - 928:25</p> <p>policy [2] - 930:5, 934:6</p> <p>poor [1] - 923:5</p> <p>portion [3] - 947:10, 967:25, 968:10</p> <p>posed [1] - 863:8</p> <p>position [8] - 919:5, 921:23, 925:2, 925:4, 926:18, 928:9, 929:9, 968:11</p> <p>possibility [2] - 892:15, 963:16</p> <p>possible [5] - 902:15, 902:16, 903:20, 913:23, 979:18</p> <p>possibly [1] - 895:25</p> <p>potentially [5] - 932:25, 933:6, 935:4, 949:22, 967:22</p> <p>powders [1] - 869:14</p> <p>PowerPoint [5] - 852:9, 920:14, 920:25, 921:7, 921:11</p> <p>PPB [2] - 872:24, 872:25</p>	<p>practicality [1] - 973:18</p> <p>practically [1] - 870:1</p> <p>practice [3] - 922:12, 922:14, 979:23</p> <p>practices [1] - 923:5</p> <p>practitioner [1] - 931:17</p> <p>preamble [7] - 930:25, 931:3, 931:7, 932:3, 934:13, 959:8, 959:14</p> <p>predictions [1] - 881:5</p> <p>preliminary [1] - 938:3</p> <p>premise [2] - 963:13, 975:22</p> <p>prepared [6] - 865:2, 865:5, 877:9, 893:7, 920:14, 932:10</p> <p>preparing [2] - 865:19, 866:6</p> <p>presence [4] - 851:6, 902:21, 917:9, 917:24</p> <p>PRESENT [1] - 848:18</p> <p>present [2] - 851:8</p> <p>presentation [1] - 954:20</p> <p>presented [4] - 859:12, 947:15, 970:23, 977:23</p> <p>pretty [2] - 930:19, 957:9</p> <p>prevalent [1] - 867:25</p> <p>prevent [2] - 943:23, 970:23</p> <p>previous [3] - 854:17, 948:12, 960:22</p> <p>previously [4] - 851:8, 872:7, 880:12, 958:2</p> <p>PREVIOUSLY [1] - 851:16</p> <p>primarily [2] - 920:10, 922:14</p> <p>primary [1] - 921:20</p> <p>principal [1] - 919:6</p> <p>priority [1] - 921:25</p> <p>private [24] - 920:9, 927:20, 927:21, 927:25, 929:3, 929:5, 929:14, 929:21, 929:23, 930:2, 930:6, 930:8, 930:10, 930:16, 931:13, 932:14, 932:16, 932:22, 932:24, 933:9, 934:1, 934:4, 934:7</p> <p>probable [3] - 868:8, 868:10, 868:17</p>	<p>problem [7] - 866:20, 866:25, 898:23, 910:4, 910:5, 926:13, 941:25</p> <p>problems [2] - 928:15, 971:1</p> <p>procedure [1] - 872:7</p> <p>PROCEEDINGS [1] - 981:10</p> <p>proceedings [3] - 851:5, 917:8, 980:25</p> <p>process [22] - 854:12, 860:18, 861:1, 861:22, 909:6, 910:4, 928:12, 928:19, 935:22, 935:23, 940:23, 940:25, 941:3, 941:13, 943:4, 947:21, 948:7, 962:2, 962:7, 962:12, 962:21, 967:10</p> <p>produced [1] - 947:14</p> <p>product [1] - 889:1</p> <p>production [2] - 868:3, 914:15</p> <p>productive [2] - 962:5, 962:6</p> <p>productively [1] - 980:19</p> <p>professional [1] - 933:24</p> <p>professionals [2] - 930:14, 950:15</p> <p>program [4] - 860:17, 922:5, 923:1, 923:2</p> <p>Program [3] - 974:10, 974:11</p> <p>programs [1] - 924:1</p> <p>project [2] - 899:10, 899:23</p> <p>Project [15] - 943:8, 948:16, 952:11, 955:9, 955:11, 966:14, 971:14, 971:21, 972:3, 972:7, 972:19, 973:10, 974:6, 974:14, 974:18</p> <p>propellant [1] - 869:15</p> <p>properties [1] - 878:25</p> <p>property [3] - 867:24, 868:5, 868:21</p> <p>protection [1] - 914:6</p> <p>provide [10] - 922:17, 924:21, 927:14, 929:9, 931:18, 943:25, 948:25, 951:24, 953:16,</p>
---	---	--	---	---

<p>958:2 provided [10] - 909:18, 921:5, 921:7, 924:5, 924:16, 924:20, 925:11, 930:4, 948:17, 958:5 provides [5] - 927:16, 927:24, 930:1, 944:20, 954:9 providing [1] - 924:22 provision [2] - 933:10, 940:20 provisions [7] - 927:19, 927:21, 928:14, 929:13, 939:2, 958:15, 961:25 proximity [1] - 949:24 PRP [1] - 932:13 PRPs [1] - 932:10 prudent [1] - 970:14 public [58] - 858:25, 859:2, 928:13, 930:5, 931:3, 934:6, 937:5, 947:7, 947:15, 947:17, 947:20, 949:11, 949:12, 950:5, 950:9, 950:10, 950:19, 953:2, 953:9, 953:16, 953:21, 954:1, 954:10, 954:25, 955:6, 955:12, 955:20, 955:25, 956:8, 956:17, 957:9, 957:22, 958:1, 958:8, 958:9, 958:15, 959:21, 960:10, 960:15, 960:18, 961:19, 962:7, 962:21, 964:17, 967:4, 967:9, 967:14, 967:24, 968:2, 969:2, 970:11, 974:16, 975:15, 975:19, 975:25, 976:2, 976:9, 976:14 Public [1] - 954:24 publications [1] - 955:5 pull [4] - 873:11, 897:23, 912:3, 920:13 pulling [3] - 897:20, 898:11, 911:19 pump [2] - 876:15, 966:22</p>	<p>pumping [27] - 876:11, 876:14, 876:16, 886:21, 886:22, 887:3, 887:14, 887:23, 893:4, 897:23, 907:15, 908:9, 910:8, 910:9, 910:11, 911:12, 911:18, 912:2, 912:11, 913:17, 914:3, 914:4, 914:8, 914:9, 914:11, 966:13 purchase [4] - 942:13, 964:24, 965:8, 972:2 purchased [4] - 943:7, 948:16, 955:8, 965:17 purchases [1] - 948:10 purchasing [4] - 966:14, 971:13, 972:7, 974:14 purpose [4] - 863:4, 899:5, 927:10, 962:5 purposes [3] - 853:5, 893:10, 977:20 PURSUANT [1] - 981:8 put [27] - 859:21, 859:24, 860:9, 860:11, 860:24, 861:2, 861:25, 862:10, 866:1, 870:4, 870:8, 873:21, 874:4, 886:17, 886:22, 887:1, 888:10, 905:24, 915:2, 921:23, 925:9, 925:16, 927:2, 936:3, 936:4, 943:13 putting [4] - 860:19, 931:4, 944:19, 951:15 puzzle [3] - 861:25, 862:2 PZ [1] - 904:18 PZ09 [1] - 904:12 PZ9 [1] - 857:13</p>	<p>quality [2] - 902:4, 952:21 Quality [2] - 937:18, 946:23 quantifiable [3] - 871:1, 891:8, 891:10 quantified [1] - 889:15 quarterly [1] - 924:4 questions [8] - 883:22, 883:23, 916:16, 927:3, 964:4, 966:25, 976:7, 977:10 quick [4] - 922:19, 922:20, 948:24, 964:8 quickly [6] - 878:18, 949:12, 952:18, 953:11, 953:18, 954:8 quite [4] - 877:24, 895:9, 916:16, 953:10</p>	<p>881:25, 899:2, 899:8, 911:13, 934:9, 948:22, 952:12, 955:15, 960:8, 960:17, 968:2, 968:19, 969:10, 972:13, 975:11, 975:23, 980:11, 980:19 REALTIME [1] - 981:5 reason [13] - 884:19, 889:16, 889:20, 897:18, 902:9, 903:5, 903:13, 903:19, 905:2, 910:5, 912:23, 934:8, 963:21 reasonable [7] - 932:25, 960:3, 971:18, 972:4, 972:8, 972:12, 973:16 reasons [9] - 866:19, 876:21, 902:6, 908:5, 935:13, 951:18, 952:8, 955:13, 959:9 rebuttal [2] - 865:20, 865:21 recalling [1] - 896:10 receive [1] - 980:6 received [8] - 871:16, 872:3, 872:6, 872:18, 888:13, 892:21, 956:18, 957:1 recently [1] - 925:23 recess [2] - 917:22, 980:22 recognized [1] - 866:20 recollection [3] - 896:12, 897:2, 897:3 record [10] - 851:7, 855:6, 867:21, 917:23, 918:13, 920:20, 920:25, 954:9, 954:19, 980:24 records [4] - 925:19, 925:21, 935:12, 957:24 recover [3] - 925:2, 929:15, 930:7 recoverability [2] - 934:16, 934:23 recoverable [4] - 935:4, 939:2, 941:18, 958:25 recovery [8] - 925:5,</p>	<p>925:12, 925:14, 926:18, 930:10, 930:17, 934:1, 934:8 red [7] - 858:15, 869:15, 874:7, 893:2, 900:25, 904:10, 904:21 redirect [2] - 870:16, 911:8 Redirect [1] - 849:5 reduced [1] - 935:21 refer [6] - 854:25, 881:21, 882:5, 882:6, 922:20, 967:7 referenced [1] - 854:13 references [7] - 853:11, 854:2, 854:14, 855:4, 855:7, 855:13, 855:21 References [2] - 854:25, 855:13 referred [2] - 926:21, 926:22 referring [4] - 872:6, 932:13, 959:4, 968:15 reflect [1] - 944:7 refresh [2] - 896:12, 897:1 refreshes [1] - 897:3 regard [2] - 915:22, 937:22 regarding [5] - 914:21, 922:2, 922:15, 957:16, 961:2 region [2] - 921:19 Region [2] - 924:3, 924:4 Regional [2] - 937:18, 946:23 regional [2] - 923:25, 924:3 regions [1] - 921:19 regular [5] - 951:17, 954:10, 954:14, 954:21, 957:8 regularly [1] - 960:23 regulate [1] - 860:8 regulation [2] - 931:1, 967:17 REGULATIONS [1] - 981:12 regulations [21] - 922:25, 923:8, 923:11, 923:18, 923:20, 923:23, 924:2, 924:5, 924:7,</p>
	<p>Q</p>	<p>R</p>		
	<p>qualification [1] - 973:14 qualified [4] - 852:15, 857:15, 857:21, 858:7 qualify [1] - 973:16</p>	<p>raise [2] - 918:7, 949:22 raised [1] - 908:5 raising [2] - 975:16, 975:18 rates [3] - 912:11, 975:16, 975:18 rather [2] - 914:9, 916:8 ratio [6] - 951:17, 953:4, 955:13, 962:16, 967:11, 968:17 ratios [2] - 953:24, 958:8 RAVEN [1] - 848:5 ravines [3] - 884:7, 884:10, 890:20 reach [1] - 907:12 reaction [1] - 931:13 read [6] - 867:21, 867:23, 881:23, 896:7, 896:15, 915:14 reader [1] - 855:20 readily [1] - 912:12 reading [1] - 969:17 reads [1] - 883:3 ready [2] - 866:7, 917:15 real [3] - 899:16, 961:22, 963:9 really [22] - 859:21, 860:18, 879:14,</p>		

<p>925:8, 927:13, 929:8, 931:2, 931:5, 931:6, 931:7, 934:11, 940:24, 950:19, 960:6, 968:23</p> <p>regulators [1] - 957:1</p> <p>regulatory [5] - 936:25, 937:2, 937:19, 945:11, 946:22</p> <p>relate [6] - 880:14, 925:16, 940:17, 945:4, 946:6</p> <p>related [13] - 888:25, 889:3, 920:11, 927:4, 937:25, 940:12, 940:14, 941:14, 947:5, 947:10, 954:2, 955:20, 958:9</p> <p>relative [1] - 932:20</p> <p>relatively [2] - 878:23, 904:13</p> <p>release [3] - 936:17, 936:23, 942:18</p> <p>released [1] - 878:8</p> <p>releases [2] - 885:14, 928:2</p> <p>relevant [5] - 915:6, 921:21, 958:10, 969:11, 977:24</p> <p>reliability [1] - 952:23</p> <p>reliable [4] - 877:5, 893:9, 893:10, 915:16</p> <p>relied [3] - 900:3, 948:11, 971:18</p> <p>relying [2] - 959:6, 959:14</p> <p>remain [2] - 851:7, 851:10</p> <p>remaining [2] - 936:2, 936:9</p> <p>remedial [6] - 863:15, 869:25, 915:3, 928:17, 928:18, 928:25</p> <p>remediation [2] - 897:15, 897:20</p> <p>remedies [2] - 928:10, 947:18</p> <p>remedy [4] - 926:10, 928:12, 947:16, 967:5</p> <p>remember [9] - 851:21, 854:12, 869:5, 869:17, 876:15, 888:5, 908:7, 914:2, 917:3</p>	<p>remind [2] - 917:15, 979:9</p> <p>remnants [1] - 869:3</p> <p>removal [39] - 921:17, 922:6, 928:21, 928:22, 928:23, 928:25, 944:3, 944:21, 945:12, 945:13, 945:15, 945:17, 945:18, 945:22, 946:11, 947:6, 947:13, 949:1, 949:7, 949:8, 949:15, 949:17, 949:25, 950:8, 950:11, 950:22, 951:9, 953:6, 953:22, 957:16, 958:10, 961:22, 961:23, 962:2, 964:16, 967:17, 972:13, 975:6, 976:1</p> <p>remove [1] - 913:22</p> <p>render [1] - 864:4</p> <p>rendered [3] - 863:19, 863:25, 864:11</p> <p>repeatedly [1] - 892:9</p> <p>repeating [1] - 873:17</p> <p>rephrase [4] - 866:14, 898:3, 903:11, 910:25</p> <p>replace [13] - 943:6, 948:23, 949:11, 950:4, 959:22, 962:4, 962:17, 963:14, 963:22, 966:8, 966:13, 972:11, 972:13</p> <p>replacement [34] - 936:1, 942:22, 943:12, 943:17, 943:20, 944:2, 944:6, 944:12, 944:16, 944:20, 945:14, 945:21, 946:2, 946:7, 946:8, 947:24, 948:5, 950:1, 950:22, 951:8, 952:22, 953:23, 954:2, 957:16, 958:10, 958:15, 958:25, 961:2, 964:24, 965:4, 965:7, 965:8, 965:20, 965:25</p> <p>replete [1] - 968:13</p> <p>replicate [1] - 899:16</p> <p>report [51] - 852:24, 853:5, 853:7, 853:8, 853:19, 853:20,</p>	<p>854:4, 854:9, 854:18, 855:1, 855:11, 862:11, 863:19, 864:5, 864:6, 864:15, 865:7, 865:9, 865:20, 865:22, 867:15, 869:7, 869:21, 869:25, 870:4, 870:8, 872:22, 876:10, 877:13, 880:3, 881:10, 886:5, 886:6, 888:15, 892:1, 893:6, 893:9, 899:7, 914:23, 915:3, 915:11, 915:14, 915:17, 915:19, 915:25, 916:1, 916:5, 916:10, 924:20, 938:17</p> <p>Report [5] - 850:4, 850:5, 850:6, 850:7, 850:8</p> <p>REPORTED [1] - 981:10</p> <p>reporter [1] - 926:4</p> <p>REPORTER [4] - 847:24, 981:1, 981:6, 981:19</p> <p>REPORTER'S [1] - 847:13</p> <p>reporting [1] - 891:8</p> <p>reports [10] - 853:23, 854:19, 854:22, 855:18, 865:3, 865:4, 866:7, 876:3, 879:14, 879:16</p> <p>represent [2] - 865:15, 899:20</p> <p>representation [4] - 856:18, 857:7, 892:24, 899:20</p> <p>representations [1] - 899:15</p> <p>represented [2] - 899:13, 973:15</p> <p>reputable [8] - 852:15, 853:24, 856:19, 856:23, 857:15, 857:21, 858:7, 877:6</p> <p>require [5] - 928:16, 945:22, 950:5, 953:16, 979:7</p> <p>required [4] - 859:25, 913:19, 937:3, 969:14</p> <p>requirement [13] - 933:16, 934:5,</p>	<p>946:15, 946:16, 946:19, 947:5, 953:21, 960:2, 967:22, 968:1, 968:19, 969:2, 976:9</p> <p>requirements [37] - 928:1, 928:18, 932:21, 933:1, 933:6, 937:8, 938:8, 940:7, 940:11, 941:13, 944:1, 945:3, 945:9, 945:10, 945:20, 946:25, 947:1, 947:2, 947:13, 947:25, 948:2, 950:7, 950:10, 952:21, 953:9, 953:15, 954:1, 955:20, 956:8, 958:13, 958:21, 960:8, 961:5, 963:6, 964:18, 968:15, 976:13</p> <p>requires [3] - 931:16, 931:22, 939:13</p> <p>requiring [1] - 934:4</p> <p>resident [1] - 949:25</p> <p>residue [1] - 869:15</p> <p>resolve [1] - 980:15</p> <p>respect [8] - 859:17, 884:25, 885:10, 899:14, 899:24, 900:20, 925:12, 961:19</p> <p>respond [2] - 968:8, 968:9</p> <p>responding [1] - 928:2</p> <p>response [20] - 922:5, 922:16, 928:16, 933:11, 933:13, 933:15, 933:22, 935:1, 935:5, 935:6, 935:18, 936:14, 936:15, 936:16, 936:20, 948:20, 952:1, 958:23, 961:16, 962:22</p> <p>Response [1] - 938:11</p> <p>responsibilities [1] - 922:4</p> <p>responsibility [2] - 921:24, 978:9</p> <p>responsible [1] - 922:1</p> <p>rest [1] - 970:4</p> <p>restrict [1] - 977:3</p> <p>result [2] - 904:14, 935:2</p>	<p>results [1] - 860:12</p> <p>retained [3] - 922:17, 924:21, 924:22</p> <p>retardants [1] - 868:2</p> <p>retardation [1] - 882:8</p> <p>rethink [1] - 909:6</p> <p>return [1] - 917:19</p> <p>review [4] - 860:6, 935:24, 946:21, 960:14</p> <p>reviewed [5] - 852:24, 860:10, 934:17, 955:25, 957:23</p> <p>reviewing [3] - 854:9, 855:11, 896:16</p> <p>revisions [1] - 923:22</p> <p>RICHARD [37] - 848:5, 896:25, 917:14, 917:21, 918:2, 918:18, 918:22, 919:18, 919:23, 920:21, 921:1, 921:4, 921:8, 921:14, 926:20, 938:22, 939:23, 940:6, 952:3, 952:18, 956:15, 956:24, 957:14, 959:18, 960:25, 961:11, 964:4, 973:3, 973:13, 976:19, 977:9, 977:15, 977:22, 978:24, 979:11, 979:15, 980:9</p> <p>Richard [8] - 849:8, 918:17, 921:3, 926:19, 952:2, 959:17, 977:8, 978:22</p> <p>Rick [1] - 894:18</p> <p>rid [1] - 893:2</p> <p>right-hand [1] - 890:6</p> <p>rigid [2] - 930:10, 968:22</p> <p>Rio [1] - 974:11</p> <p>rise [4] - 867:19, 868:2, 958:14, 970:15</p> <p>RM [1] - 898:7</p> <p>RMW8 [1] - 857:13</p> <p>road [2] - 925:2, 938:4</p> <p>robust [2] - 962:16, 962:21</p> <p>rocket [1] - 869:13</p> <p>Ron [1] - 848:20</p> <p>room [1] - 918:25</p> <p>Rosedale [1] - 974:11</p> <p>Rosedale-Rio [1] - 974:11</p>
---	--	--	--	---

<p>roughly [1] - 943:15 routine [1] - 967:12 rudinely [1] - 930:14 RPR [1] - 847:23 Rule [1] - 855:24 rules [4] - 928:5, 929:20, 930:9, 936:6 run [5] - 921:23, 957:19, 963:5, 979:3, 979:20 running [1] - 979:24 runs [1] - 979:20</p>	<p>953:7 scope [9] - 864:14, 875:11, 875:17, 889:19, 915:19, 916:1, 938:16, 951:21, 951:23 SCOTT [1] - 848:9 Scott [1] - 848:19 screen [1] - 935:5 screened [1] - 910:2 SCV [4] - 924:17, 938:11, 959:21, 973:11 seasoned [2] - 931:17, 933:23 seated [1] - 917:10 second [10] - 854:7, 855:5, 855:10, 855:19, 912:10, 937:15, 970:18, 970:25 SECTION [1] - 981:8 Section [3] - 854:16, 939:6, 974:6 section [13] - 854:25, 855:4, 855:8, 880:4, 881:2, 881:12, 882:25, 883:3, 914:23, 945:9, 969:1, 974:6, 976:18 sections [6] - 854:17, 904:12, 933:14, 939:5, 945:2, 945:18 sector [1] - 920:9 sediment [7] - 878:11, 878:15, 878:16, 878:19, 878:21, 879:1 see [38] - 851:19, 853:11, 856:13, 857:13, 858:13, 861:17, 869:8, 869:10, 873:5, 874:3, 876:10, 879:14, 881:12, 881:13, 881:19, 882:7, 883:15, 885:8, 890:6, 894:20, 900:25, 901:2, 901:18, 917:6, 920:16, 926:24, 932:24, 936:10, 939:3, 941:15, 942:22, 945:5, 958:4, 962:11, 971:11, 978:14, 980:15, 980:23 seeing [2] - 851:21, 904:15</p>	<p>seek [1] - 923:25 seem [1] - 868:15 sees [1] - 888:2 select [1] - 926:10 selected [2] - 947:16, 947:18 selecting [1] - 928:12 Semitropic [2] - 974:10 send [1] - 920:22 sense [3] - 907:20, 907:22, 919:23 sent [1] - 969:22 sentence [10] - 854:16, 867:19, 869:24, 881:4, 881:7, 881:17, 881:23, 882:15, 883:2, 908:16 sentences [2] - 867:21, 867:23 separate [3] - 926:12, 927:20, 978:2 series [2] - 909:14, 927:16 serve [2] - 946:9, 958:22 service [8] - 943:3, 943:24, 944:2, 944:9, 944:12, 948:24, 965:18 services [1] - 924:16 serving [2] - 926:2, 926:5 session [2] - 917:12, 917:25 set [10] - 923:20, 927:19, 927:20, 929:13, 931:5, 938:13, 940:23, 952:7, 952:25 sets [2] - 928:5, 928:7 setting [1] - 917:16 settlement [2] - 924:19, 957:7 several [3] - 878:7, 943:10, 950:3 sewage [1] - 869:15 shall [2] - 918:9 shallow [1] - 904:13 shipping [1] - 864:24 short [3] - 923:15, 928:21, 949:9 short-term [2] - 923:15, 928:21 shortcoming [1] - 960:16 shortened [1] - 922:24 shorter [5] - 884:10, 884:11, 884:12,</p>	<p>928:20, 962:11 show [19] - 854:2, 854:4, 854:6, 856:2, 856:22, 856:24, 857:1, 857:2, 872:13, 882:18, 882:22, 882:25, 886:12, 900:14, 906:1, 912:24, 913:6, 937:2 showed [2] - 912:23, 916:17 showing [1] - 912:21 shown [5] - 852:2, 857:7, 857:14, 863:12, 898:18 shows [6] - 871:23, 872:10, 902:21, 935:1, 955:2, 955:7 shut [5] - 969:25, 970:5, 970:22, 971:7, 977:2 shutdown [4] - 952:16, 952:17, 952:22, 959:21 SIC [1] - 876:1 sic [1] - 908:10 side [4] - 851:24, 856:11, 904:15, 910:11 signed [1] - 947:19 significance [1] - 888:19 significant [2] - 915:6, 972:10 similar [2] - 881:9, 932:3 simple [3] - 912:8, 912:12, 966:19 simplify [1] - 903:12 simply [3] - 878:24, 951:19, 966:21 single [1] - 921:6 sit [1] - 971:9 site [74] - 859:10, 863:16, 865:12, 867:9, 867:12, 867:14, 868:11, 868:14, 869:3, 870:21, 871:24, 872:11, 872:14, 873:3, 873:9, 874:10, 875:21, 875:25, 876:20, 877:23, 877:24, 878:12, 882:11, 883:7, 885:14, 885:18, 885:20, 885:21, 885:22, 886:1, 890:16,</p>	<p>890:17, 892:6, 893:14, 894:12, 897:16, 898:19, 900:1, 902:18, 907:6, 907:20, 909:22, 910:12, 910:21, 911:3, 911:16, 912:5, 912:20, 913:3, 913:11, 913:18, 913:23, 914:16, 914:22, 915:4, 915:23, 915:24, 916:6, 928:7, 928:9, 928:15, 928:16, 930:8, 931:23, 932:18, 932:22, 933:21, 955:22, 960:13, 967:8, 968:24 sites [19] - 869:11, 920:11, 921:16, 921:24, 921:25, 922:2, 922:9, 922:10, 922:12, 922:13, 922:17, 923:15, 927:15, 927:23, 929:2, 929:6, 929:9, 929:10, 950:14 sitting [3] - 889:22, 891:17, 912:4 situation [16] - 929:17, 937:22, 941:4, 941:6, 950:20, 953:22, 958:22, 960:8, 960:10, 960:13, 963:5, 963:14, 963:17, 968:15, 968:24, 976:13 situations [5] - 941:8, 946:20, 949:23, 950:12, 958:19 six [8] - 947:23, 947:25, 962:1, 962:3, 963:2, 963:3, 963:8 skewed [1] - 876:16 slide [20] - 920:16, 921:6, 922:22, 927:12, 929:24, 930:23, 931:25, 932:10, 932:21, 935:1, 938:11, 939:3, 939:4, 949:20, 950:13, 950:25, 951:12, 951:15, 952:15, 957:3</p>
S				
<p>S-1 [1] - 884:1 S-2 [1] - 885:5 S-3 [1] - 904:13 S-3A [1] - 871:21 safe [3] - 944:22, 946:9, 948:25 safety [1] - 949:22 salts [2] - 867:2 samples [3] - 895:10, 895:13, 898:5 sampling [2] - 866:17, 866:19 San [3] - 848:11, 848:16, 898:25 sandblast [1] - 869:15 SANTA [1] - 847:5 Santa [1] - 924:12 satisfied [1] - 946:15 satisfy [1] - 946:19 Saugus [57] - 858:21, 863:21, 870:25, 876:1, 886:10, 886:13, 886:14, 886:17, 886:19, 887:9, 888:18, 889:6, 889:11, 889:12, 889:24, 890:21, 890:22, 891:1, 891:9, 891:10, 891:19, 893:4, 893:12, 893:13, 893:23, 894:10, 898:11, 899:2, 902:21, 903:8, 903:20, 903:24, 911:22, 911:23, 912:4, 937:14, 939:8, 939:9, 939:12, 939:13, 940:20, 941:5, 941:10, 941:21, 941:22, 942:1, 977:4 saw [4] - 870:25, 872:21, 876:15,</p>				

<p>slides ^[1] - 954:4</p> <p>sludge ^[2] - 869:15, 869:16</p> <p>small ^[4] - 897:23, 913:17, 913:21, 914:5</p> <p>smaller ^[1] - 914:7</p> <p>smiling ^[1] - 877:3</p> <p>softer ^[1] - 882:20</p> <p>soil ^[2] - 878:10, 949:24</p> <p>soils ^[1] - 878:17</p> <p>solely ^[1] - 978:2</p> <p>solemnly ^[1] - 918:8</p> <p>solicited ^[1] - 916:16</p> <p>solid ^[1] - 869:8</p> <p>solution ^[4] - 925:24, 925:25, 941:25, 947:10</p> <p>solvent ^[1] - 868:2</p> <p>someone ^[1] - 955:19</p> <p>sometime ^[1] - 887:13</p> <p>sometimes ^[3] - 979:20, 979:21</p> <p>somewhat ^[1] - 859:20</p> <p>soon ^[3] - 861:2, 886:23, 965:17</p> <p>sorry ^[38] - 852:1, 853:6, 856:1, 858:17, 859:1, 860:4, 860:14, 862:24, 866:8, 869:22, 873:16, 874:6, 874:7, 874:16, 881:7, 882:4, 882:21, 883:21, 884:2, 886:12, 886:18, 888:12, 890:12, 892:20, 900:24, 902:16, 903:4, 903:9, 904:19, 905:8, 916:4, 916:9, 939:12, 969:17, 975:3, 976:24</p> <p>sort ^[8] - 861:25, 888:1, 924:1, 931:3, 937:19, 946:4, 950:13, 950:16</p> <p>sounds ^[3] - 865:14, 865:17, 865:18</p> <p>source ^[38] - 875:5, 875:21, 883:7, 884:7, 889:10, 889:11, 889:23, 890:20, 891:1, 891:5, 891:6, 891:12, 891:13, 891:24, 892:14,</p>	<p>900:13, 902:15, 902:16, 902:17, 902:18, 902:19, 902:22, 903:20, 903:23, 903:24, 906:5, 906:23, 908:4, 909:4, 909:15, 915:1, 915:16, 916:5, 916:7, 941:10, 941:11, 959:12</p> <p>sources ^[17] - 875:9, 875:22, 875:24, 891:18, 891:21, 891:22, 891:23, 891:25, 892:1, 909:9, 909:12, 909:14, 954:17, 957:15, 974:7, 974:12, 974:19</p> <p>South ^[1] - 848:6</p> <p>south ^[1] - 901:20</p> <p>southern ^[1] - 890:17</p> <p>space ^[2] - 874:10, 874:17</p> <p>speaking ^[2] - 928:17, 940:3</p> <p>speaks ^[2] - 958:19, 960:7</p> <p>specialty ^[1] - 952:13</p> <p>specific ^[19] - 859:20, 868:13, 884:24, 925:13, 931:23, 932:18, 932:22, 933:21, 944:24, 955:22, 958:20, 960:10, 960:13, 960:14, 961:25, 964:21, 968:24, 969:1, 976:18</p> <p>specifically ^[14] - 854:13, 855:15, 869:5, 869:18, 876:23, 889:20, 907:11, 925:11, 927:19, 938:23, 938:25, 946:8, 958:21, 959:6</p> <p>speculation ^[3] - 956:22, 957:10, 960:20</p> <p>spell ^[1] - 918:14</p> <p>spend ^[2] - 920:17, 947:3</p> <p>spending ^[2] - 941:2, 947:4</p> <p>spent ^[5] - 865:21, 866:2, 869:13, 921:20, 922:13</p> <p>spot ^[2] - 860:24,</p>	<p>869:22</p> <p>spots ^[2] - 859:22, 859:24</p> <p>staff ^[2] - 971:24, 972:6</p> <p>stained ^[1] - 869:16</p> <p>stand ^[1] - 926:25</p> <p>standard ^[6] - 929:24, 931:16, 934:1, 936:13, 940:21, 949:7</p> <p>Stanin ^[14] - 850:4, 850:5, 850:6, 850:7, 850:8, 851:10, 851:19, 856:2, 883:17, 911:10, 912:16, 914:12, 914:21, 916:15</p> <p>STANIN ^[2] - 849:4, 851:15</p> <p>STANLEY ^[1] - 847:3</p> <p>start ^[12] - 860:17, 860:19, 917:11, 933:4, 934:20, 934:24, 935:19, 935:21, 953:24, 962:10, 978:22, 980:3</p> <p>started ^[4] - 916:6, 927:7, 943:4, 943:17</p> <p>starting ^[1] - 867:19</p> <p>starts ^[4] - 853:11, 882:8, 934:21, 955:3</p> <p>State ^[16] - 943:7, 948:16, 952:11, 955:9, 955:10, 965:11, 966:14, 971:13, 971:21, 972:3, 972:7, 972:19, 973:10, 974:6, 974:14, 974:17</p> <p>state ^[9] - 868:21, 868:23, 869:21, 882:11, 886:5, 903:24, 918:14, 946:22, 967:17</p> <p>statement ^[6] - 865:17, 870:7, 931:8, 932:2, 932:3, 956:1</p> <p>statements ^[1] - 959:7</p> <p>states ^[1] - 977:2</p> <p>STATES ^[4] - 847:1, 981:6, 981:8, 981:13</p> <p>States ^[3] - 868:3, 921:16, 923:2</p> <p>States.. ^[1] - 867:19</p> <p>statistical ^[2] - 906:13, 906:20</p>	<p>statute ^[2] - 923:3, 923:9</p> <p>STENOGRAPHICAL</p> <p>LY ^[1] - 981:10</p> <p>step ^[5] - 916:25, 935:2, 935:22, 935:23, 948:7</p> <p>steps ^[1] - 947:12</p> <p>stepwise ^[2] - 927:16, 927:22</p> <p>stick ^[3] - 868:16, 932:7, 957:12</p> <p>still ^[6] - 911:17, 912:1, 919:18, 920:24, 947:3, 961:22</p> <p>stip ^[1] - 919:15</p> <p>stipulated ^[4] - 872:8, 888:11, 892:20, 969:23</p> <p>Stone ^[2] - 848:19, 947:19</p> <p>stop ^[7] - 926:3, 935:19, 936:11, 943:16, 950:21, 951:1, 959:11</p> <p>stopped ^[2] - 965:14, 965:21</p> <p>stopping ^[1] - 872:13</p> <p>Storage ^[1] - 974:8</p> <p>stored ^[1] - 963:17</p> <p>story ^[1] - 970:5</p> <p>straight ^[1] - 960:1</p> <p>streamline ^[1] - 904:4</p> <p>streamlines ^[1] - 899:1</p> <p>STREET ^[1] - 847:24</p> <p>Street ^[3] - 848:6, 848:10, 848:15</p> <p>stretch ^[1] - 956:9</p> <p>strict ^[1] - 931:9</p> <p>strike ^[2] - 915:20, 960:19</p> <p>structure ^[2] - 888:24, 927:14</p> <p>studies ^[3] - 879:16, 879:18, 879:23</p> <p>study ^[3] - 879:15, 928:8, 928:19</p> <p>stuff ^[1] - 877:21</p> <p>stumble ^[1] - 930:20</p> <p>subject ^[3] - 871:10, 917:4, 961:24</p> <p>submit ^[1] - 954:20</p> <p>submitted ^[1] - 877:10</p> <p>subsequent ^[1] - 923:22</p> <p>substance ^[1] - 936:24</p> <p>substances ^[3] -</p>	<p>928:3, 936:17, 936:24</p> <p>substantial ^[10] - 929:25, 931:12, 931:15, 932:11, 932:12, 932:16, 933:20, 933:25, 948:4, 959:25</p> <p>substantive ^[1] - 934:9</p> <p>subsurface ^[2] - 899:3, 901:14</p> <p>suck ^[2] - 970:16, 970:19</p> <p>sucking ^[1] - 970:6</p> <p>sufficient ^[8] - 885:15, 885:25, 892:10, 906:10, 907:13, 907:17, 966:12, 969:25</p> <p>sufficiently ^[1] - 906:21</p> <p>suggest ^[2] - 883:5, 914:14</p> <p>suggesting ^[1] - 966:20</p> <p>Suite ^[1] - 848:16</p> <p>SUITE ^[1] - 847:24</p> <p>summarized ^[1] - 931:3</p> <p>summoned ^[1] - 896:24</p> <p>Superfund ^[9] - 922:25, 923:1, 923:3, 923:14, 923:20, 923:21, 927:13, 927:15, 929:2</p> <p>supplies ^[1] - 959:22</p> <p>supply ^[33] - 860:3, 872:25, 875:8, 875:17, 875:18, 880:14, 882:12, 884:20, 907:7, 909:22, 913:2, 913:5, 913:21, 914:10, 926:1, 941:10, 942:22, 943:6, 944:4, 944:13, 944:21, 948:23, 950:4, 950:6, 952:6, 954:12, 954:16, 962:4, 962:18, 963:15, 963:17, 963:21, 972:13</p> <p>Supply ^[2] - 954:24, 974:7</p> <p>support ^[1] - 890:25</p> <p>supports ^[3] - 902:24,</p>
---	---	--	--	--

<p>968:10, 969:2 suppose [1] - 892:7 surface [14] - 877:23, 878:5, 879:11, 951:16, 951:18, 952:7, 952:11, 953:3, 954:14, 955:9, 955:14, 962:17, 967:11 surprised [1] - 879:14 surrounding [1] - 950:18 sustain [1] - 973:5 sustained [4] - 908:19, 956:14, 956:23, 957:11 sustaining [1] - 915:21 swear [1] - 918:8 SWORN [2] - 851:16, 918:20 sworn [2] - 918:4, 918:7 system [20] - 859:18, 861:13, 863:16, 863:18, 897:15, 897:20, 899:20, 911:14, 911:25, 942:10, 942:17, 943:4, 943:14, 944:20, 950:6, 951:15, 952:6, 962:15, 966:13, 972:11</p>	<p>862:18, 863:21, 867:11, 867:14, 867:25, 868:5, 868:11, 868:15, 869:23, 871:1, 871:18, 871:23, 872:10, 872:23, 873:1, 873:11, 875:21, 875:25, 888:19, 888:25, 889:3, 891:13, 891:18, 891:19, 894:2, 895:18, 904:14, 909:23, 913:3 TCRA [21] - 949:3, 949:4, 949:5, 953:9, 954:1, 956:8, 958:14, 961:17, 961:22, 961:25, 964:16, 967:16, 974:20, 974:23, 975:6, 975:23, 975:24, 976:3, 976:4, 976:9, 976:13 technical [1] - 972:9 technology [1] - 971:1 ten [2] - 876:19, 895:8 tend [1] - 949:21 term [11] - 912:18, 914:2, 923:1, 923:15, 925:24, 928:11, 928:20, 928:21, 941:20, 947:10 terms [9] - 852:24, 853:22, 879:1, 888:18, 901:18, 926:17, 965:19, 967:3, 973:21 tested [1] - 897:5 testified [8] - 897:8, 906:4, 939:2, 948:10, 972:16, 972:24, 973:8, 977:24 testify [2] - 966:21, 972:1 testifying [3] - 866:7, 866:8, 907:16 testimony [17] - 879:18, 912:24, 914:24, 915:19, 916:17, 918:8, 920:11, 924:22, 926:15, 945:23, 960:22, 967:15, 967:20, 973:3, 973:21, 977:25, 978:14</p>	<p>testing [2] - 869:10, 879:9 text [2] - 853:19, 854:4 THAT [3] - 981:7, 981:8, 981:11 THE [126] - 848:3, 848:12, 851:7, 851:12, 851:13, 851:16, 855:23, 862:17, 862:19, 868:18, 870:15, 870:17, 872:5, 875:13, 875:15, 882:19, 883:17, 883:21, 883:22, 883:24, 890:10, 890:12, 895:1, 895:2, 896:4, 896:9, 896:13, 896:19, 903:11, 905:15, 905:20, 908:1, 908:14, 908:19, 910:25, 911:7, 915:20, 916:2, 916:22, 916:24, 917:10, 917:18, 917:23, 918:4, 918:6, 918:12, 918:13, 918:15, 918:17, 918:20, 919:17, 919:21, 920:19, 920:24, 921:3, 921:6, 921:10, 921:13, 925:10, 925:15, 926:3, 926:6, 926:19, 938:18, 939:16, 939:22, 939:25, 940:2, 940:5, 951:22, 952:4, 956:14, 956:23, 957:11, 957:13, 959:3, 959:7, 959:11, 959:15, 959:16, 960:21, 961:13, 961:21, 962:5, 962:13, 962:19, 962:24, 962:25, 963:3, 963:16, 963:19, 964:2, 964:6, 964:10, 968:7, 968:12, 970:18, 970:21, 970:25, 973:5, 973:14, 973:17, 976:21, 976:23, 977:8, 977:11, 977:13, 977:16, 977:17, 978:3, 978:16, 978:19,</p>	<p>979:9, 979:13, 980:2, 980:5, 980:17, 981:6, 981:7, 981:8, 981:9, 981:10, 981:11, 981:12, 981:13 themselves [5] - 924:24, 928:1, 931:7, 956:21, 957:20 therefore [4] - 935:7, 969:9, 976:15, 980:18 thinking [4] - 892:8, 892:15, 968:23, 978:24 thinks [1] - 883:20 third [1] - 855:9 THIS [1] - 981:15 thousand [2] - 874:20, 879:5 threat [1] - 949:10 three [15] - 855:13, 857:13, 857:21, 858:6, 858:8, 858:10, 862:11, 865:3, 865:4, 865:7, 888:18, 894:10, 894:20, 900:11, 938:13 threshold [2] - 935:15, 942:2 thwarted [1] - 930:7 tie [1] - 950:5 timing [1] - 912:7 TITLE [1] - 981:8 TO [2] - 847:8, 981:8 today [12] - 862:13, 862:14, 866:7, 866:8, 889:23, 891:17, 916:19, 919:1, 921:22, 923:23, 924:22, 980:7 Todd [9] - 864:19, 864:20, 864:21, 864:23, 864:24, 865:1, 865:5, 865:7 together [5] - 862:1, 882:2, 885:1, 912:25, 925:17 toluylene [1] - 871:6 tomorrow [13] - 917:2, 917:7, 978:1, 978:5, 978:12, 978:17, 978:23, 979:10, 979:14, 979:17, 980:3, 980:18, 980:23 tonight [1] - 978:14</p>	<p>took [5] - 869:2, 944:11, 963:9, 963:21, 963:23 top [4] - 873:14, 873:18, 874:25, 896:10 total [1] - 866:9 touch [1] - 901:16 touched [1] - 931:10 toward [2] - 888:2 towards [4] - 873:14, 893:22, 894:10 toxic [1] - 943:25 track [3] - 861:12, 871:3, 889:15 trackable [1] - 889:21 tracking [1] - 870:24 transcript [1] - 896:16 TRANSCRIPT [3] - 847:13, 981:9, 981:11 travel [4] - 880:5, 881:2, 884:25, 885:11 treated [1] - 946:1 treatment [14] - 887:9, 926:7, 937:12, 938:5, 938:23, 939:1, 940:9, 940:11, 940:17, 940:19, 942:10, 942:15, 942:17, 943:5 trenching [1] - 869:10 trend [1] - 862:4 trends [2] - 862:7, 862:8 TRIAL [1] - 847:13 trial [6] - 851:7, 917:24, 948:11, 951:25, 977:21, 978:2 tried [1] - 967:15 trier [1] - 931:18 trouble [1] - 892:8 TROWBRIDGE [1] - 848:15 Trudell [2] - 979:11, 979:23 true [7] - 858:24, 867:20, 870:5, 870:9, 875:1, 879:10, 902:24 TRUE [1] - 981:9 trumps [1] - 899:18 truth [4] - 918:10, 924:1 try [7] - 891:20, 895:1, 903:11, 924:25, 932:6, 939:25, 941:2</p>
<p>T</p>				
<p>table [11] - 868:24, 880:11, 880:12, 880:15, 880:19, 880:21, 880:24, 880:25, 937:7, 948:12 Table [3] - 861:5, 974:6 talks [2] - 853:19, 952:15 task [2] - 875:20, 957:6 TCA [6] - 869:23, 889:6, 894:5, 916:8, 916:9 TCE [45] - 852:6, 856:13, 856:18, 856:23, 857:14, 857:20, 857:22, 857:24, 858:4, 858:6, 858:10, 858:21, 858:25, 859:4, 859:6, 859:9,</p>				

<p>trying [18] - 852:14, 854:11, 860:14, 861:10, 861:14, 871:3, 876:5, 885:13, 885:17, 896:11, 899:4, 903:9, 913:24, 927:15, 931:23, 949:20, 954:15, 979:19</p> <p>Tuesday [1] - 978:11</p> <p>turned [1] - 911:23</p> <p>turning [1] - 967:11</p> <p>turnouts [1] - 977:5</p> <p>turns [1] - 935:11</p> <p>two [22] - 863:10, 867:21, 867:23, 872:23, 895:20, 901:16, 906:4, 908:5, 908:6, 908:14, 908:22, 911:15, 921:18, 922:19, 922:20, 946:1, 947:9, 948:4, 961:14, 970:24, 973:9, 980:14</p> <p>type [4] - 928:20, 950:20, 953:22, 958:13</p> <p>types [3] - 949:17, 949:23, 950:11</p> <p>typical [6] - 949:19, 950:11, 950:22, 951:9, 953:6, 967:16</p> <p>typically [1] - 937:2</p>	<p>understandably [1] - 922:12</p> <p>unique [1] - 941:6</p> <p>UNITED [4] - 847:1, 981:6, 981:8, 981:13</p> <p>United [4] - 867:19, 868:3, 921:16, 923:2</p> <p>University [1] - 919:12</p> <p>unlimited [1] - 974:22</p> <p>unsaturated [1] - 879:15</p> <p>up [35] - 852:5, 852:8, 853:8, 863:2, 871:12, 878:1, 878:14, 886:11, 888:10, 890:9, 894:18, 901:18, 905:24, 916:15, 917:2, 917:16, 920:13, 921:15, 922:1, 922:9, 926:17, 927:2, 927:15, 927:23, 928:6, 929:6, 930:13, 938:13, 941:24, 951:15, 952:7, 952:25, 963:17, 979:4</p> <p>upgradient [7] - 876:16, 876:18, 888:1, 888:7, 910:22, 912:8, 912:13</p> <p>upper [2] - 883:3, 894:18</p> <p>ups [1] - 923:14</p> <p>upshot [1] - 953:23</p> <p>Urban [2] - 956:1, 973:21</p> <p>useful [1] - 940:4</p> <p>USEPA [1] - 921:15</p> <p>uses [3] - 868:1, 897:14, 906:9</p> <p>Utilization [1] - 954:24</p> <p>utilize [1] - 977:3</p> <p>utilized [1] - 969:14</p>	<p>943:24, 948:5, 957:5, 966:11, 969:18, 970:5, 970:9</p> <p>V-205 [28] - 857:24, 863:21, 873:18, 883:14, 905:24, 909:10, 911:12, 911:15, 911:17, 912:2, 912:4, 913:13, 938:5, 941:22, 942:10, 942:15, 942:17, 942:20, 944:6, 944:8, 944:9, 944:15, 948:6, 966:25, 969:12, 969:14, 970:5, 971:7</p> <p>vadose [1] - 879:15</p> <p>vague [1] - 915:21</p> <p>VALLEY [1] - 847:5</p> <p>Valley [5] - 884:13, 885:5, 893:19, 893:22, 924:12</p> <p>valuation [1] - 931:18</p> <p>values [1] - 871:1</p> <p>valves [1] - 967:11</p> <p>variability [2] - 878:25, 955:8</p> <p>variables [2] - 878:19, 879:9</p> <p>variation [1] - 906:9</p> <p>varies [5] - 877:24, 877:25, 879:5, 884:5, 955:14</p> <p>variety [6] - 876:21, 878:24, 880:16, 951:18, 952:8, 955:13</p> <p>various [10] - 861:20, 869:16, 912:11, 928:11, 940:7, 940:16, 955:4, 958:8</p> <p>vary [1] - 879:7</p> <p>varying [1] - 955:15</p> <p>velocities [4] - 880:4, 880:15, 880:16, 881:9</p> <p>velocity [5] - 881:5, 881:8, 881:14, 881:24, 883:4</p> <p>version [3] - 922:24, 929:7, 942:7</p> <p>versions [1] - 876:19</p> <p>versus [3] - 884:16, 930:16, 966:7</p> <p>via [1] - 972:18</p> <p>video [3] - 979:16, 979:23</p> <p>view [7] - 932:15, 942:3, 942:16,</p>	<p>943:20, 955:22, 962:6, 976:14</p> <p>violating [1] - 944:1</p> <p>visible [6] - 949:21, 950:16, 951:3, 952:24, 967:8, 967:22</p> <p>Vista/Rosedale [1] - 974:9</p> <p>visually [1] - 950:13</p> <p>VOC [14] - 867:25, 900:12, 900:13, 902:5, 909:13, 937:21, 937:24, 939:14, 939:16, 941:20, 941:25, 947:2, 963:4, 977:4</p> <p>VOCs [53] - 864:12, 867:24, 870:25, 879:19, 880:1, 880:7, 888:18, 888:20, 893:25, 897:5, 898:1, 898:12, 898:13, 898:15, 901:8, 901:11, 902:2, 902:7, 902:9, 902:11, 902:17, 902:21, 903:7, 903:8, 903:15, 903:17, 903:20, 903:24, 904:10, 904:16, 904:23, 905:5, 905:7, 905:11, 906:21, 907:22, 909:9, 910:15, 910:16, 913:6, 913:10, 925:25, 940:10, 940:13, 940:15, 940:21, 941:1, 941:14, 941:23, 942:6, 947:5, 947:11</p> <p>VOLUME [1] - 847:8</p> <p>vs [1] - 847:7</p>	<p>866:16, 872:21, 872:25, 875:7, 875:17, 875:18, 876:17, 880:13, 882:12, 884:20, 886:19, 887:15, 887:24, 888:1, 888:2, 888:3, 897:20, 900:10, 900:12, 902:4, 907:7, 909:21, 912:1, 912:2, 913:2, 913:5, 913:21, 914:6, 924:23, 925:11, 926:1, 934:17, 935:2, 941:10, 942:14, 942:22, 943:3, 943:4, 943:6, 943:7, 943:11, 943:12, 943:17, 943:21, 943:25, 944:3, 944:4, 944:6, 944:11, 944:12, 944:13, 944:16, 944:19, 944:20, 944:21, 944:22, 944:23, 945:8, 945:14, 945:21, 946:2, 946:7, 946:9, 946:10, 947:20, 947:24, 948:5, 948:8, 948:10, 948:15, 948:23, 948:25, 949:1, 949:11, 950:1, 950:5, 950:22, 951:2, 951:8, 951:15, 951:16, 951:18, 952:5, 952:6, 952:7, 952:10, 952:11, 952:13, 952:20, 952:21, 952:22, 952:23, 952:25, 953:2, 953:3, 953:23, 954:2, 954:3, 954:9, 954:11, 954:13, 954:14, 954:16, 955:5, 955:8, 955:9, 955:13, 955:14, 956:3, 957:17, 957:21, 957:24, 958:1, 958:10, 958:15, 958:25, 959:22, 961:2, 961:4, 962:4, 962:14, 962:17, 964:24, 965:4, 965:7, 965:8, 965:9,</p>
<p>U</p>				
<p>U.S [3] - 847:3, 867:25, 934:11</p> <p>ultimately [3] - 931:17, 934:22, 942:19</p> <p>unable [1] - 897:12</p> <p>uncertainties [1] - 947:4</p> <p>uncertainty [1] - 910:3</p> <p>under [21] - 851:10, 855:24, 881:1, 881:2, 922:14, 922:16, 929:21, 936:21, 938:13, 939:2, 940:23, 941:7, 942:17, 943:21, 944:17, 946:10, 960:11, 960:14, 969:3, 970:1, 974:6</p> <p>underneath [1] - 900:23</p>	<p>V</p>	<p>V-201 [29] - 857:24, 863:21, 873:18, 876:10, 876:23, 876:24, 877:17, 883:12, 889:7, 911:12, 912:1, 912:2, 912:3, 937:15, 941:22, 942:21, 943:2, 943:7, 943:13, 943:17, 943:21,</p>		
	<p>W</p>			
	<p>walk [1] - 854:11</p> <p>WAS [2] - 851:16, 918:20</p> <p>Washington [2] - 848:15, 923:25</p> <p>waste [6] - 920:11, 921:23, 922:13, 923:6, 927:23, 929:10</p> <p>wastes [1] - 869:8</p> <p>watch [1] - 916:25</p> <p>water [175] - 860:3,</p>			

<p>965:11, 965:15, 965:17, 965:20, 965:25, 966:1, 966:8, 966:11, 966:13, 967:11, 968:17, 970:6, 970:7, 970:11, 970:22, 971:6, 971:12, 971:13, 971:18, 971:21, 972:2, 972:6, 972:7, 972:16, 972:17, 972:18, 972:19, 973:1, 973:9, 973:10, 974:7, 974:12, 974:14, 974:17, 977:3 WATER [1] - 847:5 Water [30] - 924:12, 924:17, 937:18, 938:1, 938:11, 940:22, 941:9, 943:7, 946:23, 948:16, 952:11, 954:24, 955:9, 955:10, 956:1, 959:21, 966:14, 971:13, 971:21, 972:3, 972:7, 972:19, 973:10, 973:11, 973:22, 974:6, 974:9, 974:14, 974:18 ways [1] - 905:18 website [2] - 957:21, 957:24 Wednesday [1] - 979:4 week [1] - 978:10 weighing [1] - 962:8 welcome [2] - 940:5, 977:13 wells [101] - 857:21, 857:22, 858:7, 858:8, 858:10, 858:24, 859:5, 859:20, 859:23, 860:1, 860:4, 860:8, 860:10, 860:15, 860:19, 860:25, 861:7, 861:24, 862:5, 862:16, 862:21, 863:7, 863:9, 863:11, 863:13, 864:13, 866:16, 871:9, 871:10, 872:25, 873:1, 874:13, 874:14, 874:25, 875:8, 875:10,</p>	<p>875:17, 875:18, 876:4, 876:21, 877:11, 877:18, 882:12, 883:8, 884:20, 886:16, 890:15, 890:18, 891:9, 893:4, 894:11, 896:1, 897:23, 898:14, 898:20, 900:11, 902:11, 902:19, 904:7, 904:15, 907:6, 907:7, 907:10, 907:15, 908:8, 909:22, 910:7, 911:18, 911:21, 911:22, 911:24, 912:10, 913:2, 913:5, 913:8, 913:17, 913:19, 913:20, 913:21, 914:3, 914:4, 914:6, 914:9, 914:10, 914:15, 941:21, 941:23, 941:25, 942:5, 948:23, 950:3, 951:1, 952:16, 952:17, 959:21, 977:3 west [1] - 894:11 WEST [1] - 847:24 western [3] - 894:21, 900:6, 900:11 WESTERN [1] - 847:2 white [4] - 851:24, 852:3, 852:5, 890:14 WHITTAKER [1] - 847:8 Whittaker [71] - 852:16, 855:15, 856:19, 856:21, 860:8, 869:23, 870:21, 871:9, 871:24, 872:10, 872:14, 872:22, 874:10, 875:6, 875:21, 877:23, 878:12, 879:14, 879:16, 880:13, 882:11, 885:18, 885:20, 885:22, 886:1, 890:2, 890:4, 891:1, 891:13, 893:7, 893:14, 894:11, 897:16, 898:24, 900:1, 902:14, 902:22, 903:21, 903:24, 904:6, 906:5, 907:6, 907:20, 908:4,</p>	<p>909:4, 909:10, 909:22, 910:12, 911:3, 912:5, 912:20, 913:3, 913:18, 914:16, 914:22, 915:4, 915:15, 915:23, 915:24, 916:6, 943:9, 943:16, 956:16, 956:18, 957:15, 958:4, 965:3, 965:7, 965:14, 965:21, 965:25 Whittaker's [2] - 856:17, 956:25 whole [9] - 918:10, 929:11, 931:8, 932:24, 933:17, 935:3, 944:22, 946:8, 968:22 widespread [1] - 868:3 willing [1] - 917:15 wish [2] - 938:20, 952:1 WITH [1] - 981:12 withdrawn [3] - 980:11, 980:13, 980:15 witness [15] - 851:9, 854:9, 855:11, 873:23, 896:3, 896:16, 896:17, 917:13, 918:1, 939:15, 978:2, 978:4, 978:5, 978:7, 978:15 WITNESS [32] - 851:12, 862:19, 870:17, 875:15, 883:21, 883:24, 890:10, 890:12, 895:2, 908:14, 918:12, 918:15, 925:15, 926:6, 939:22, 939:25, 940:5, 952:4, 957:13, 959:7, 959:15, 961:21, 962:13, 962:24, 963:3, 963:19, 968:12, 970:21, 973:17, 976:23, 977:13, 977:16 WITNESSES [2] - 849:1, 849:3 witnesses [3] - 896:20, 896:23, 977:19</p>	<p>word [2] - 880:10, 884:3 words [4] - 852:15, 875:19, 905:18, 921:8 works [1] - 877:2 writing [1] - 851:25 written [1] - 959:9</p> <p>Y</p> <p>year [10] - 852:21, 862:25, 863:1, 863:3, 886:23, 895:11, 895:12, 920:3, 922:8, 965:1 years [27] - 863:5, 867:12, 867:16, 868:6, 868:12, 868:16, 868:25, 880:7, 880:8, 883:6, 887:11, 895:8, 910:19, 911:24, 920:6, 921:20, 922:13, 924:18, 927:3, 934:19, 943:10, 952:9, 953:1, 955:2, 955:6, 968:21, 976:2 years' [1] - 910:18 yell [1] - 939:23 Yolo [1] - 972:25 York [2] - 919:12, 921:19 yourself [5] - 857:9, 896:15, 946:8, 946:15, 946:19</p> <p>Z</p> <p>Z-e-l-i-k-s-o-n [1] - 918:16 ZELIKSON [2] - 849:7, 918:19 Zelikson [18] - 917:14, 918:3, 918:6, 918:15, 918:23, 924:10, 925:13, 939:18, 939:24, 957:12, 959:4, 959:11, 961:15, 964:13, 968:9, 971:5, 976:6, 977:12 zone [13] - 876:6, 876:7, 876:13, 876:14, 877:15, 877:16, 879:15, 888:9, 893:11, 898:25, 899:5, 899:7 zones [13] - 876:12,</p>	<p>876:13, 876:20, 876:22, 876:24, 877:9, 877:10, 877:18, 892:25, 893:3, 898:18, 899:12, 899:13 Zoom [2] - 917:16, 961:7</p>
--	--	---	--	---